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DECIMUM HUNC

NATURÆ VIVARII

FASCICULUM,

D. D. D.

GEORGIUS SHAW,

FREDERICUS P. NODDER.

TO THE

ROYAL SOCIETY OF LONDON,

DISTINGUISHED BY ATTENTION

TO EVERY BRANCH OF SCIENCE,

THIS TENTH VOLUME

OF THE

NATURALIST'S MISCELLANY

IS

WITH THE HIGHEST RESPECT INSCRIBED,

BY

GEORGE SHAW,

FREDERICK P. NODDER.

STURNUS LUDOVICIANUS.

Character Genericus.

Roſtrum ſubulatum, angulato-depreſſum, obtuſiuſculum : Mandibula ſuperiore integerrima, marginibus patentiuſculis.

Nares ſupra marginatæ.

Lingua emarginata, acuta.

Lin. Syſt. Nat. p. 290.

Character Specificus, &c.

STURNUS griſeo fuſcoque maculatus, ſubtus flavus, linea capitis ſuperciliiſque albis, gula nigra.

Lath. ind. orn. p. 323.

STURNUS Ludovicianus.

Lin. Syſt. Nat. p. 290.

ALAUDA magna.

Lin. Syſt. Nat. p. 289.

In variis Americæ Septentrionalis partibus generatur avis quam depinximus, ſturno vulgari paulo major. Variat coloribus. Interdum enim evenit ut cingatur

cingatur utrinque guttur linea nigra, quæ ſenſim ſe dilatans quaſi lunulam nigram ducit trans pectus; quæ lunula in aliis ſpeciminibus vix ac ne vix viſibilis eſt. Nonnullorum quoque ſpeciminum albent remiges externi. In editione duodecima Syſtematis Linnæani dantur huic avi duo diverſa genera, Sturni nempe et Alaudæ, ab experientia autem ſatis jam compertum eſt varietates ejuſdem ſpeciei cauſam fuiſſe erroris.

Pub.d by F.P.Nodder
Sept.r 89.

THE

CRESCENT STARLING.

Generic Character.

Bill ſtrait, depreſſed.

Noſtrils guarded above by a prominent rim.

Tongue hard and cloven.

Middle Toe united to the outmoſt as far as the firſt joint.

Lath. Synops. 2. p. 1.

Specific Character, &c.

Pale-brown STARLING ſpotted with duſky: beneath yellow with black throat.

Large LARK.

Cateſb. Car. 1. p. 33. *pl.* 33.

Louiſiane STARE.

Lath. Syn. 2. p. 6.

Creſcent STARE.

Penni. Arct. Zool. 2. p. 330.

ETOURNEAU de la Louiſiane.

Buf. ois. 3. p. 192. *Pl. enl.* 256.

The bird here repreſented is found in ſeveral parts of North America, and in ſize ſomewhat exceeds

the common Starling. It is ſubject to ſome variety in point of colour; the throat in ſome ſpecimens being black, which deſcends in a dilated band beneath, ſo as to form a black creſcent acroſs the breaſt; while in others this appearance is ſcarce perceptible. The external tail-feathers are alſo white in ſome individuals. This bird in the twelfth edition of the Syſtema Naturæ was arranged under two different genera; viz. thoſe of Sturnus and Alauda; but later obſervations have proved the varieties, which cauſed this impropriety, to belong to the ſelf ſame ſpecies.

R N.

Pubd by F.P. Nodder Sept.r 98.

RANA PARADOXA.

Character Genericus.

Corpus tetrapodum, ecaudatum, nudum.
Lin. Syſt. Nat. p. 354.

Character Specificus, &c.

RANA femoribus poſtice oblique ſtriatis.
Lin. Syſt. Nat. p. 356.
Muſ. ad. Frid. 2. p. 40.

LARVA.

Lacerta cauda ancipiti, palmis tetradactylis fiſſis, plantis pentadactylis palmatis, abdomine ventricoſo.
Lin. Syſt. Nat. ed. 6. p. 36.

RANA piſcis.
Lin. Muſ. Ad. Frid. 1. p. 49.

Seb. 1. p. 123. *t.* 78. *f.* 15---21.
Mer. Sur. t. 78. *f.* 1---5.

Pleriſque ſatis cognitum eſt ranam noſtram vulgarem, ſimul atque ex ovo eruperit, gyrinum eſſe, cauda inſtructum longa, complanata, pinnata, pinnuliſque branchialibus utrinque a capite ſitis; quæ penitus delentur cum animal plene formatum adoleverit,

rit, cauda tamen paulo diutius remanente. Prægrandem autem gyrinum ranæ, quam Linnæus *paradoxam* nominavit, e miſta quadam et ambigua natura conſtare exiſtimarunt nonnulli; quodque cauda carnoſa piſcis corpus quodammodo referat, *ranam-piſcem* eum vocaverunt, crediderintque ſatis inepte in piſcem transformari, et a piſce iterum gradatim ranam fieri. Ranam tamen veram in larva delitescere dubitabit nemo qui conformationem ejus probe examinaverit, præcipue ſi cum gyrinis ranarum etiam nonnullarum Europæarum comparaverit; cum illo nempe qui in Roeſelii hiſtoria ranarum tabula octodecima depingitur, quique non longe cedit magnitudine minoribus ranæ paradoxæ ſeu Surinamenſis ſpeciminibus.

Accidere ſolet huic, quod et gyrinis Europæis, ut pro diverſa ætate vel pedes tantum poſteriores, vel quatuor omnes cernantur; immo ut majorum nonnullorum ſpeciminum, eorum nempe quæ ſex aut octo uncias longitudine ſuperant, pedes tantum poſteriores appareant, cum aliorum minorum quatuor omnes pedes æque ſint conſpicui. Mirabilium horum animalium in Muſeo Britannico et Leveriano extant ſpecimina. In Muſeo quoque Britannico eximium aſſervatur ſpecimen ranæ ipſius integræ et perfectæ, cujus oſtendit figura noſtra veram magnitudinem; nec non gyrini, qui alteri tabulæ adjicitur. Patet omnino majorem eſſe gyrinum hujus ſpeciei, ſi cum perfecto animali comparetur, gyrinis aliarum omnium ranarum quas adhuc novimus. Americam incolit auſtralem, Surinamiam præcipue.

Exiſti-

Exiſtimare videtur Gmelinius in auctiore ſua editione Syſtematis Linnæani, caudam carnoſam hujus gyrini animali etiam adulto permanere. Sed errat vir doctus; cum deſit ranæ perfectæ vel minimum caudæ veſtigium. Veriſimile porro eſt non omnia magnorum gyrinorum quæ in muſeis continentur ſpecimina, ad ranam paradoxam revera et ſingulatim pertinere; ſed ad alias quaſdam grandiores ſpecies, Americanas, Africanas, ſeu Aſiaticas; ranam nempe ocellatam, marinam, aliaſque.

THE

PARADOXICAL FROG.

Generic Character.

Body four-footed, naked, without tail.

Specific Character, &c.

FROG with the thighs ſtreaked in an oblique direction behind.

The TADPOLE.

FROG FISH of Surinam.

Edw. Phil. Tranſ. v. 51. p. 653. *pl.* 15.

Edw. Mem. p. 30. *pl.* 2.

Few perhaps are unacquainted with the firſt form under which the common Frog appears, after its excluſion from the ovum or ſpawn; viz. that of a Tadpole, furniſhed with a long, flat, finny tail, and with ramified branchial fins on each ſide the head, which are obliterated when the animal has acquired its complete or perfect form; the tail ſtill remaining ſome time longer. The tadpole of the frog called by Linnæus rana paradoxa, is of ſo large a ſize that it has been conſidered as a being of an ambiguous or mixed nature, and has been named the frog-fiſh; the

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the fleſhy appearance of the tail bearing ſome reſemblance to the body of a fiſh; and from this circumſtance it was preſumed, by thoſe who were ignorant of its real nature, that it gradually arrived at the ſtate of a fiſh, and from thence reverted to that of a frog. That it is really no other than a frog in a larva ſtate will be evident to every one who conſiders its ſtructure; and more particularly if it be collated with the tadpole of ſome even of the frogs of Europe; for inſtance that figured on the 18th plate of Roefels' Hiſtoria Ranarum, where the larva does not fall very far ſhort of the ſize of ſome of the ſmaller ſpecimens of the frog-fiſh of Surinam. Like our European tadpoles, this animal, according to the more or leſs advanced ſtate in which it is found, is furniſhed either with all the four legs, or with only the two hinder ones: it alſo ſometimes happens that in the largeſt ſized of theſe tadpoles, exceeding perhaps the length of ſix or eight inches, only the hind-legs appear, while in thoſe of far ſmaller ſize both the fore and hind legs are equally conſpicuous. Specimens of theſe curious animals occur both in the Britiſh and Leverian Muſeums: in the Britiſh Muſeum is alſo preſerved a fine ſpecimen of the complete or perfect frog, which is here repreſented in its natural ſize, as is likewiſe the larva or tadpole on the other annexed plate.

It will readily appear that the tadpole of this frog is larger in proportion to the complete animal than in any other ſpecies hitherto diſcovered. It is a native of South America, and has been principally obſerved in Surinam. Dr. Gmelin, in his enlarged edition

edition of the Syſtema Naturæ, ſeems to ſuppoſe that the fleſhy part of the tail of the tadpole ſtill remains after the animal has acquired its complete form; but this is by no means the caſe: not the leaſt veſtige of that part being viſible in the perfect frog.

Laſtly, it may not be improper to obſerve that perhaps all the ſpecimens of theſe very large tadpoles which occur in Muſeums, may not be thoſe of the rana paradoxa in particular, but of ſome other ſpecies of American, African, or Aſiatic frogs, as the rana ocellata, marina, &c. &c.

ANTIPATHES MYRIOPHYLLA.

Character Genericus.

Animal creſcens plantæ facie.

Stirps intus cornea, ſpinis exiguis obſita, baſi explanata, extus carne gelatinoſa, verrucis polypiferis obducta.

Soland. et Ellis Zooph. p. 97.

Character Specificus, &c.

ANTIPATHES incurva ramoſiſſima pinnata, pinnulis hinc ramoſis ſetaceis.

Soland. et Ellis Zooph. p. 102.

ANTIPATHES incurva ramoſiſſima pinnataque, ramis ſparſis divaricatis, pinnulis rariuſculis ſetaceis, hinc ramoſis.

Pall. elench. zooph. p. 210.

MYRIOPHYLLUM Indicum ramoſiſſimum.

Petiv. gaz. t. 35. *f.* 12.

ERICA marina tenuis.

Rumpf. amb. 6. p. 209.

In mari Indico præcipue creſcit Antipathes myriophylla, magnitudine circiter pedali vel ſeſquipedali. Coloris eſt fuſci vel ex flavo fuſci, in diverſis ſpeciminibus plus minus ſaturati.

MILFOIL ANTIPATHES.

Generic Character.

Animal growing in the form of a plant.

Stem expanded at the baſe, internally horny, beſet with ſmall ſpines: externally covered with a gelatinous fleſh beſet with numerous polype-bearing tubercles.

Specific Character, &c.

ANTIPATHES with numerous, incurved, pinnated branches, with the pinnules ſpined on their upper ſide.

Yarrow-like ANTIPATHES.

Ellis and Soland. Zooph. p. 102.

The Antipathes myriophylla or Milfoil Antipathes grows principally in the Indian ocean: its height is about a foot or a foot and half. Its color is either brown or yellowiſh-brown, more or leſs deep in different individuals.

PHASIANUS VARIUS.

Character Genericus.

Roſtrum breve, robuſtum.
Genæ cute nuda lævigata.
Pedes (pleriſque) calcarati.
Lin. Syſt. Nat. Gmel. p. 737.

Character Specificus.

PHASIANUS niger, fronte rubra, collo dorſoque viridi-nitentibus, cauda compreſſa adſcendente, tectricibus utrinque dependentibus.

Nunc primum in publicum prodit pictura formoſæ hujus ſpeciei, quæ avibus non antea deſcriptis videtur annumeranda. Magnitudine paulo cedit gallo communi ſeu gallinaceo, corpus tamen habens pro mole gracilius. Pars nuda rubra et carunculata in fronte oculos quoque amplectitur, et excurrit ſuperius quaſi in criſtam planam, inferius in paleam quaſi obſcure bifidam. Diſponuntur adeo pennæ colli dorſique anterioris, ut totidem ſquamas ſeu conchas quodammodo referant. Alarum tectrices minores lanceolatæ ſunt (ut loquuntur phyſici) nigræ, flavo-aurantio marginatæ. Lanceolatæ quoque ſunt

caudæ tectrices utrinque dependentes, nigræ, marginibus ochraceis. Roſtrum pedeſque ſubflavent.

Quanam in patria generatur venuſta hæc avis, non pro certo cognitum eſt; conjicimus tamen eſſe Indicam.

THE

VARIEGATED PHEASANT.

Generic Character.

Bill ſhort and ſtout.
Cheeks covered by a ſmooth naked ſkin.
Legs in moſt ſpecies furniſhed with ſpurs.

Specific Character.

Black PHEASANT, with red front, gloſſy-green neck and back, and compreſſed-aſcending tail with the coverts hanging down on each ſide.

This beautiful bird ſeems to be a non-deſcript, of which the preſent figure is the firſt that has been preſented to the public. Its natural ſize is ſomewhat inferior to that of a common Cock, and the habit or ſhape of the body is more ſlender in proportion. The carunculated or red part in front takes in the eyes, and is continued upwards into a kind of plain comb or creſt, and downwards into an obſcurely-divided wattle or flap. The feathers of the neck and upper part of the back are ſo ſhaped and diſpoſed as to reſemble a kind of ſcales or ſhells:

the ſmaller wing-coverts are black, lanceolate, and deeply edged with bright orange-yellow: the tail-coverts hang down on each ſide, and are alſo of a long, narrow, and ſharpened form, and are black with ochre-coloured edges: the bill and legs are yellowiſh. The native country of this ſpecies is perhaps not clearly aſcertained, but is is probably an Indian bird.

TUBULARIA CAMPANULATA.

Character Genericus.

Stirps tubulosa, simplex vel ramosa, basi affixa.
Animal terminale, capite tentaculis cristato.

Character Specificus, &c.

TUBULARIA crystallina tentaculis lunatis, receptaculo simplici vel multifido-palmato.

TUBULARIA crystallina.
Pall. elench. zooph. p. 85.

TUBULARIA campanulata.
Lin. Syst. Nat. p. 1303.

TUBULARIA reptans.
Lin. Syst. Nat. Gmel. p. 3835.

POLYPI cristati.
Trembl. polyp. 3. p. 209. *t.* 10. *f.* 8. 9.

Animalium minorum aquaticorum in pulcherrimis est quod in tabula depingitur tum aucta, tum naturali magnitudine. Aquas incolit puriores stagnantes, decem nempe, duodecim, seu quindecim in communi

muni receptaculo gregatim degentibus, ſingulo tamen motus ſuos ad libitum, et ſine impedimento exercente. Totam congeriem, qualis nudo oculo cernitur ſine ope inſtrumentorum opticorum, repræſentat minor tabulæ figura. Affigitur, ut plurimum, hæc congeries fibris radicularum in aquis immerſarum, aut caulibus plantarum aquaticarum, Lemnæ ſcilicet, Veronicæ Beccabungæ, aliarumque plurium. Singulo animalculo corpus eſt ſub-cylindraceum, tubulatum, hyalinum, in tubo majore incluſum; e quo pars ſuperior ad libitum protruditur; qui tubi majores connectuntur cum ipſo receptaculo communi, gelato, nec longe abſimili quaſi campanulatæ veſicæ marginem habenti in ſegmenta aliquot truncato-tubulata inciſum. Caput unicuique ſeu pars ſuperior conſtat e membris duobus amplis, ſemicirculatis, tenſilibus, quorum numeroſiſſima tentacula diſponuntur quaſi in formam literæ *ſ*; expanſaque ſimilia quodammodo ſunt calceamento equino. Tota conglomeratio vitreo-hyalina eſt; fibrarumque quaquaverſum velociſſime commotarum elegantem et veram proportionem nequit fideliter ſatis attingere ars ſculptoria; non niſi ipſius animalculi intuitu plene percipiendam; cum ſingulis tentaculis ſua et peculiaris inſit pulchritudo. Tentaculorum ope gyratis quaſi in vorticem aquis, varia fortaſſe animalcula in os facilius attrahuntur. Si ſubito turbantur Tubulariæ, dicto citius intra tubos majores et exteriores ſeſe recipiunt; et horæ momento iterum extenduntur; ſunt enim impatientes carceris, gaudentque, ut plurimum, membris liberis

et

et expanſis; quo tempore de forma et motu generali vel nudo oculo poſſit judicari. Sunt præterea ea magnitudine ut non opus ſit pollentibus inſtrumentis, ſed lente tantum cujus (ut optici loquuntur) uncialis ſit focalis diſtantia. Ut tamen ſingulæ partes plene et penitius examinentur, neceſſe omnino eſt microſcopio uti.

Menſibus æſtivis conſpici poſſint pulcherrima hæc animalcula in variis aquis Londino adjacentibus. Inveniebantur Tubulariæ quas repræſentat tabula, Auguſto menſe, juxta ambulacrum Chelſeanum, a ſalicibus *Willow-Walk* dictum; qua etiam in aqua nec non in aliis pluribus ſuburbanis habitat Hydra communis ſeu viridis.

CAMPANULATED TUBULARIA.

Generic Character.

Stem tubular, ſimple or branched, fixed by the baſe.

Animal terminal; the head creſted with tentacula.

Specific Character, &c.

Cryſtalline TUBULARIA with tentacula diſpoſed in the form of a creſcent; the receptacle either ſimple, or more or leſs palmated.

Veſicular freſh-water TUBULARIA.

FEATHER-POLYPE, or Bell-Polype.

POLYPES à panache.

Trembl.

The BELL-FLOWER ANIMAL, or Plumed Polype.

Baker. Empl. for. Micr. p. 306. *pl.* 12. *f.* 15—20.

Among the moſt beautiful of the ſmaller aquatic animals may moſt juſtly be ranked that repreſented on the preſent plate both in its natural ſize as well as

Oct^{r}, 98 F. Nodder,

as magnified. It is a native of clear ſtagnant waters, living in a kind of congregated manner; ſeveral individuals to the number of ten, twelve, or fifteen, inhabiting a common or general receptacle: each exerting its own voluntary motions independent of the reſt. To the naked eye the whole groupe appears of the ſize repreſented by the ſmaller figure. It is generally attached either to the ſmall fibres of roots projecting into the water, or to the ſtems of aquatic plants as Lemna, Brooklime, and others. The body of each animal is tranſparent, of a ſubcylindric, tubular form, and is included in a larger or exterior tube, from which the head or upper part is at pleaſure protruded. The larger or exterior tubes are connected to the veſicular and ſomewhat bell-ſhaped general receptacle, which is of a gelatinous ſubſtance, and is divided at the top or border into ſeveral tubular, truncated ſegments. The head of the animal conſiſts of two large, ſemicircular, expanſile parts or organs, the tentacula of which are extremely numerous, in ſhape reſembling an italic *ſ*, and, when expanded, repreſenting in ſome meaſure the figure of an horſe-ſhoe. The whole is of a glaſſy tranſparency, and the various flexures of the tentacula, moving with rapidity in different directions, afford a ſpectacle which it is not poſſible by any engraving to expreſs with ſufficient exactneſs, ſince nothing but an actual view of the animal can convey a genuine idea of this particular; every varying poſition of the tentacula diſplaying an elegance peculiar to itſelf. When diſturbed they ſuddenly

denly withdraw into the larger or exterior tubes, and in a moment or two afterwards again extend themſelves: they even ſeem impatient of confinement, and are commonly ſeen with the heads expanded, in which ſtate their general ſhape and motions may be obſerved with the naked eye; and indeed the ſize of this animal is ſuch as not to require the aſſiſtance of powerful magnifiers, but may be viewed to conſiderable advantage by a lens of an inch focus; though in order to examine with accuracy its ſeveral parts it is neceſſary to make uſe of a microſcope.

Theſe beautiful Zoophytes may be found during the Summer months in various waters in the neighbourhood of the Metropolis: the ſpecimens repreſented on the preſent plate were diſcovered in the water by the ſide of the Willow-Walk at Chelſea, in which, as well as in ſeveral of the neighbouring waters, may alſo be found the Hydra viridis or common green Polype.

ANTHIAS ARGUS.

Character Genericus.

Caput totum ſquamoſum; operculo anteriore ſerrato.

Bloch. ichth. 9. p. 86.

Character Specificus, &c.

ANTHIAS argenteo-cæruleſcens, maculis numeroſis ocellaribus fuſcis.

ANTHIAS maculis rotundis.

Bloch. ichth. 9. p. 95. *t.* 317.

Anthiæ genus inſtituit celeberrimus Blochius. Continentur in illo multæ ſpecies eximiæ pulchritudinis, quarum nullis cedit elegantia animal quod in tabula oſtenditur, argenteo-album, partibus ſuperioribus colore læte cæruleo obductis, maculiſque annulatis ſeu ocellatis fuſcis, quarum alba ſunt centra, undique guttatum. Carent puncto albo quæ caput, pinnas pectorales, et ventrales occupant minores maculæ. De patria nihil pro certo cognitum. In longitudinem duodecim unciarum creſcit Anthias Argus. In genere *Percæ* locum illi proculdubio aſſignaſſet ſyſtema Linnæanum.

THE

ARGUS ANTHIAS.

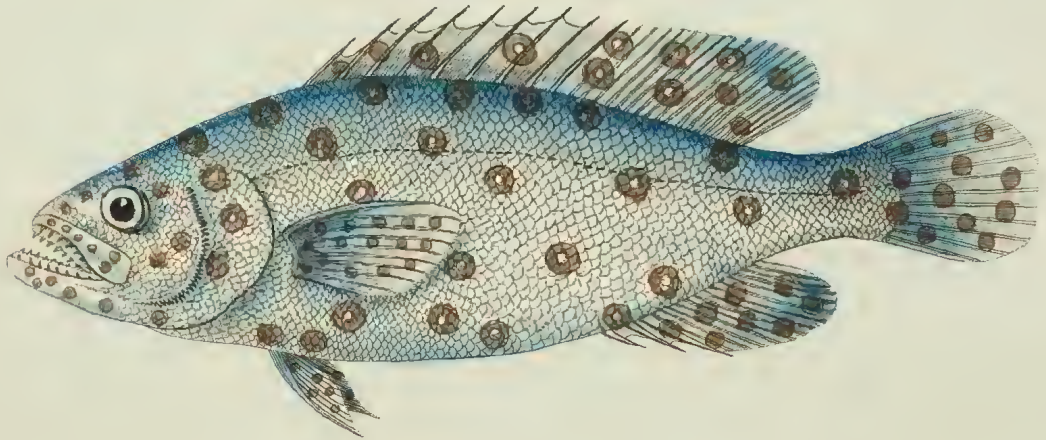
Generic Character.

Head completely ſcaled: anterior gill-cover ſerrated.

Specific Character.

Silvery-blueiſh ANTHIAS, with numerous ocellated brown ſpots.

The genus Anthias, inſtituted by Dr. Bloch, contains ſeveral ſpecies of extreme beauty; of which the animal here repreſented is certainly one of the moſt elegant. Its color is a ſilvery white, tinged with fine blue on the upper parts, and marked all over with annular or ocellated ſpots of a brown color with white centres. On the head, pectoral and ventral fins, the ſpots are ſmaller and without the white centres. The native country of this fiſh ſeems unknown. It grows to about the length of a foot. In the Linnæan arrangement it would doubtleſs have been placed in the genus Perca.



Oct.r 98 J. P. Nodder.

PHALÆNA POLYPHEMUS.

Character Genericus.

Antennæ ſetaceæ, a baſi ad apicem ſenſim attenuatæ.

Alæ (ſedentis) ſæpius deflexæ. (Volatu nocturno.)
Lin. Syſt. Nat. p. 808.

Character Specificus, &c.

PHALÆNA alis ſubfalcatis griſeo-flaveſcentibus, faſcia nigricante ocelloque feneſtrato, poſteriorum majori, ſubcyaneo.

PHALÆNA alis patentibus falcatis griſeo carneis, faſcia atra ocelloque feneſtrato, poſteriorum majori.

Fabr. ſp. inſ. 2. p. 168.
Lin. Syſt. Nat. Gmel. p. 2402.
Cram. inſ. 1. *t.* 5. *f.* A. B.

In America ſeptentrionali innaſcitur Phalæna Polyphemus. Tabula illam exprimit magnitudine naturali. Larva ejus magna, viridis, varias quercus præcipue depaſcitur, et in chryſalidem fuſco-flaveſcentem convertitur.

POLYPHEMUS.

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Generic Character.

Antennæ ſetaceous, decreaſing in ſize from the baſe to the tip.
Wings, when at reſt, generally deflected.
Flight nocturnal.

Specific Character.

PHALÆNA with ſubfalcated yellowiſh-grey wings marked by an ocellated central ſpot and duſky marginal band: the ſpot on the lower wings very large and blueiſh.

The Phalæna Polyphemus is a native of North America, and is repreſented on the plate in its natural ſize. The caterpillar, which is large and green, feeds principally on the different kinds of oaks, and changes into a yellowiſh-brown chryſalis.

MEROPS ERYTHROCEPHALUS.

Character Genericus.

Roſtrum curvatum, compreſſum, carinatum.
Lingua apice laciniata.
Pedes greſſorii.

Lin. Syſt. Nat. p. 182.

Character Specificus, &c.

MEROPS viridis, ſubtus flavicans, capite rubro, faſcia oculari nigra, gula lutea.

APIASTER Indicus erythrocephalos.
Briſſ. av. 4. p. 563. *t.* 44. 3. A.

MEROPS erythrocephalus.
Lin. Syſt. Nat. Gmel. p. 463.
Lath. Ind. Orn. p. 274.

Adeo accurate deſcripſit hanc ſpeciem celeberrimus Briſſon ut ipſius auctoris verba non dubitem proferre.

" Hanc Apiaſtri ſpeciem nondum mihi videre contigit: ipſius deſcriptionem deſumpſi ab icone ad avem ipſam depicta a Domino Poivre, et ſic eam æri inſculptam eſſe curavi.

Apiaſtrem Angolenſem craſſitie paululum ſuperat. Ipſius longitudo ab apice roſtri ad caudam extremam ſex circiter pollices explet, et ad extremos ungues quinque pollices et ſex lineas. Roſtrum ab ipſius apice ad oris angulos uſque ſexdecim lineas longum eſt; cauda unum pollicem cum novem lineis; pes quinque lineas; trium digitorum anticorum medius cum ungue octo lineas, extimus ſeptem lineas, intimus quinque cum ſemi lineas; poſticus autem quatuor tantum lineas. Alæ complicatæ nonnihil ultra mediam caudæ longitudinem extenduntur. Caput et pars colli ſuperior ſplendido imbuuntur coccineo. In utroque capitis latere tænia exſtat nigra, ab exortu roſtri orta, et per oculos ducta. Dorſum, uropygium, pennæ ſcapulares et ſuperiores caudæ tectrices ſunt eleganter virides. Guttur luteum eſt. Pars colli inferior, pectus, venter, latera et crura luteſcunt, et pauco rubro adumbrantur. Pennæ caudam ſubtus obtegentes ſunt quoque luteſcens, ſed dilute viridi marginatæ. Superiores alarum tectrices ſaturate virides. Remiges ſuperne eodem viridi ſaturato imbutæ, interius cinereo marginatæ, ſubtus autem penitus cinereæ. Caudam componunt duodecim rectrices æquali longitudine pollentes, omnes ſubtus cinereæ; ſuperne vero binæ intermediæ virides: laterales omnes concolores, interius cinereo marginatæ. Oculorum irides rubræ. Roſtrum nigrum. Pedes cinerei; ungues vero nigricantes. Habitat in India Orientali.

THE

RED-HEADED BEE-EATER.

Generic Character.

Bill curved, compreſſed, carinated, and ſharp-pointed.

Tongue (generally) laciniated at the tip.

Feet greſſorial.

Specific Character, &c.

Green BEE-EATER, yellowiſh beneath, with red head, black eye-ſtreak, and yellow throat.

Le GUESPIER a teſte rouge des Indes.
Briſſ. ois. 4. p. 563. *pl.* 44. *f.* 3. A.

GUEPIER a tête rouge.
Buf. ois. 6. p. 508.

This bird is moſt accurately deſcribed in the following manner by the celebrated Briſſon.

This ſpecies of Bee-Eater I have never ſeen: but have taken its deſcription from a figure drawn from nature by Monſ. Poivre, and have cauſed it to be engraved. In ſize it rather exceeds the Bee-Eater of Angola. Its length from the tip of the beak to

the end of the tail is about ſix inches, and to the ends of the claws five inches and ſix lines. The beak from the tip to the angles of the mouth is ſixteen lines long; the tail one inch and nine lines; the foot five lines; the middle of the three front toes together with the claw eight lines, the exterior ſeven lines, the interior five lines and a half; the hind toe only four lines. The wings when cloſed extend a little beyond the middle of the tail. The head and upper part of the neck are of a bright ſcarlet. On each ſide of the head is a black ſtripe, riſing from the beginning of the bill, and paſſing through the eyes. The back, rump, ſcapular feathers, and upper tail-coverts are of an elegant green. The throat is yellow. The lower part of the neck, the breaſt, belly, ſides and thighs are yellowiſh and ſhaded with a little red. The under tail-coverts alſo are yellowiſh, but edged with pale-green. The upper wing-coverts are deep-green. The quill-feathers are of the ſame full-green above, and within edged with aſh-color, but beneath are entirely aſh-coloured. The tail conſiſts of twelve feathers of equal length, all of which are aſh-coloured beneath, but the two middle ones are green above; the reſt of the ſame color, but edged internally with aſh-color. The irides of the eyes are red. The feet aſh-color: the claws blackiſh. It is a native of the Eaſt Indies.

SEPIA OCTOPODIA.

Character Genericus.

Corpus carnoſum: vagina excipiente pectus, ad cujus baſin tubus.

Brachia (præter bina tentacula pedunculata in pleriſque) octo interius adſperſa cirris verrucoſis.

Os inter brachia, terminale, corneum.

Lin. Syſt. Nat. Gmel. p. 3149.

Character Specificus, &c.

SEPIA corpore ecaudato, tentaculis pedunculatis nullis.

Lin. Syſt. Nat. p. 1095.
Lin. Syſt. Nat. Gmel. p. 3149.

POLYPUS octopus.

Rondel. piſc. 513.

OCTOPODIA.

Haſſelg. act. ups. 1750. p. 33.

POLYPUS pelagius.

Seb. muſ. 3. p. 4. *t.* 2. *f.* 1—7.

Magna interdum huic animali moles eſt; major nullibi quam in oceano Indico et Septentrionali. Narrat

Narrat Dominus Pennantus ſe ab hominibus fide dignis accepiſſe, in certis maris Indici partibus viſa interdum fuiſſe ſpecimina, quorum ſingula brachia longa eſſent novem orgyias; Indoſque navigium ſuſcipere non audere, niſi prius latis ſecuribus inſtructos, ut brachia ſepiæ cymbam prenſantis poſſint abſcindere: quod ni faciant periclitari ipſam cymbam ne ſub aquis mergatur.

Lepidam hiſtoriam ex Trebio Nigro excerpſit Plinius de monſtro hujuſmodi *, quod immodicis in receptacula commiſſis furtis, non levem piſcatorum iram in ſe convertit.

" Cætera, quæ idem retulit, monſtro propiora poſſunt videri.

Carteïæ in cetariis aſſuetus exire e mari in lacus eorum apertos, atque ibi ſalſamenta populari, (mire omnibus marinis expetentibus odorem quoque eorum: qua de cauſa et naſſis illinuntur:) convertit in ſe cuſtodum indignationem aſſiduitate furti. Immodicæ his ſepes erant objectæ: ſed has tranſcendebat per arborem: nec deprehendi potuit, niſi canum ſagacitate. Hi redeuntem circumvafere noctu, concitique cuſtodes expavere novitatem. Primum omnium magnitudo inaudita erat: deinde color muria obliti, odore diri. Quis ibi polypum expectaſſet, aut ita cognoſceret? cum monſtro dimicare ſibi videbantur. Namque et afflatu terribili canes agebat, nunc extremis crinibus flagellatos, nunc robuſtioribus brachiis clavarum modo incuſſos, ægrequc multis

* *S. Loligine?*

triden-

tridentibus confici potuit. Oſtendere Lucullo caput ejus, dolii magnitudine, amphorarum quindecim capax, atque, (ut ipſius Trebii verbis utar) barbas, quas vix utroque brachio complecti eſſet, clavarum modo toroſas: longas pedum tricenûm: acetabulis, ſive caliculis urnalibus, pelvium modo: dentes magnitudini reſpondentes. Reliquiæ aſſervatæ miraculo pependere pondo DCC."

Huc forſan referenda ſunt quæ vaga et incerta ſcribuntur de monſtro Arctico, *Kraken* ſeu *Korven* dicto; quod veriſimile eſt originem duxiſſe ab ingentibus aliquibus hujus ſpeciei ſpeciminibus, in mari ſeptentrionali viſis, et in majus, ut fit, celebratis.

THE

EIGHT-ARMED CUTTLE-FISH.

Generic Character.

Body fleſhy, ſheathing the breaſt, which is furniſhed at its baſe with a tubular opening.

Arms eight, (and in moſt ſpecies two pedunculated tentacula,) beſet with numerous ſuckers or acetabula.

Head ſhort; *Eyes* large; *Mouth* reſembling a Parrot's beak.

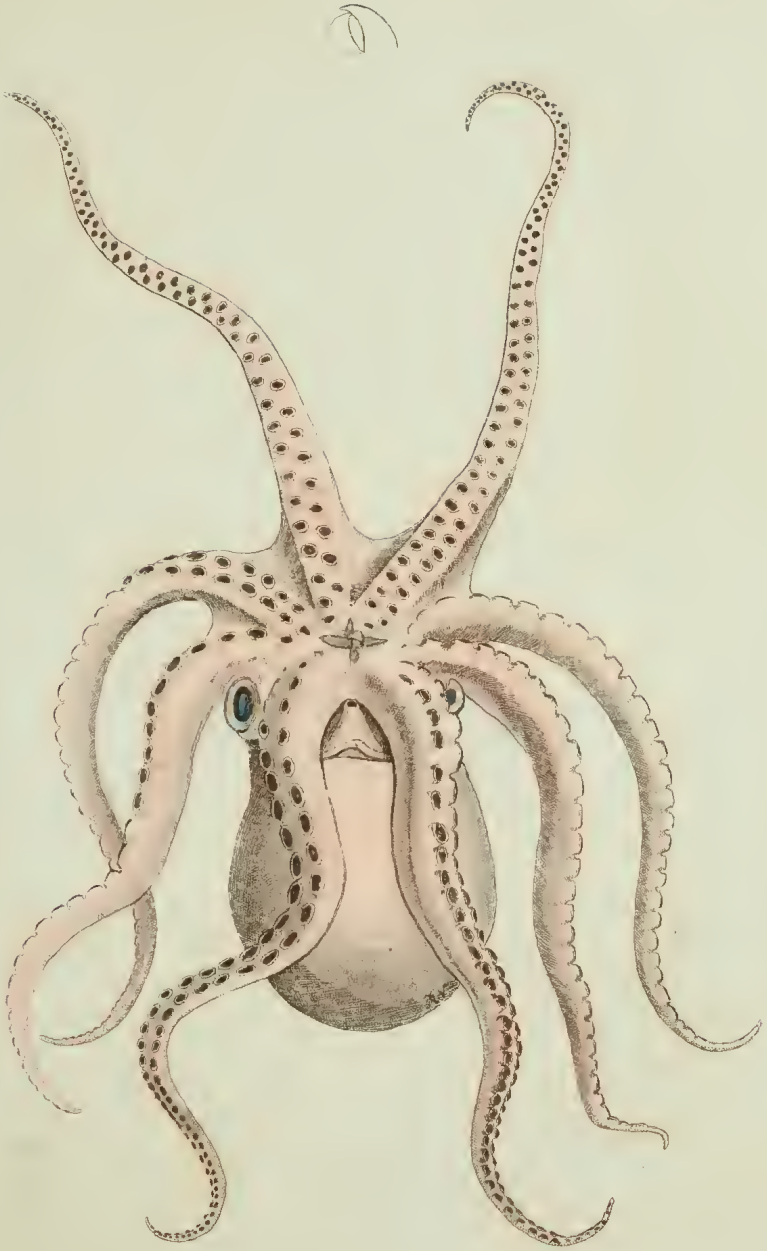
Specific Character, &c.

Short-bodied CUTTLE-FISH, without any tail or appendage; with eight arms and no tentacula or longer arms.

The SEA POLYPUS.

The eight-armed CUTTLE-FISH.
*Penn*t. *Br. Zool.* 4. p. 44. *pl.* 28.

The ſize to which this animal ſometimes grows is very great; but it is in the Indian and Northern ſeas that it ſeems to arrive at its fulleſt magnitude. Mr. Pennant tells us he has been well aſſured that in ſome



Pubd Novr 98. by F.P. Nodder.

ſome parts of the Indian ſeas, ſpecimens have been ſeen with each arm of the length of nine fathoms; and that in thoſe ſeas the Indians never venture to navigate their canoes or boats without being provided with broad hatchets in order to cut off the arms of the cuttlefiſh, ſhould it happen to attack the veſſel, which it ſometimes does in ſuch a manner as greatly to endanger its being drawn under water.

A moſt entertaining account is given by Pliny, from Trebius Niger, of an enormous monſter of this kind (perhaps a Loligo), near the coaſt of Carteïa, which uſed to rob the neighbouring reſervoirs of ſalted fiſh, and which continued its depredations in ſo alarming a manner as to provoke the vengeance of the enraged proprietors.

This tale, in the tranſlation of honeſt Philemon Holland, runs thus.

" The reſt which mine author hath related as touching this fiſh, may ſeem rather monſtrous lies and incredible, than otherwiſe: for he affirmed, that at Carteia there was one of theſe Polypi, which uſed commonly to go forth of the ſea, and enter into ſome of their open ceſterns and vauts among their ponds and ſtewes, wherein they kept great ſea-fiſhes, and otherwhiles would rob them of their ſalt-fiſh, and ſo go his waies againe: which he practiſed ſo long, that in the end he gat himſelfe the anger and diſpleaſure of the maſters and keepers of the ſaid ponds and ceſterns, with his continuall and immeaſurable filching: wherupon they ſtaked up the place and empalled

palled it round about, to ſtop all paſſage thither. But this thiefe gave not over his accuſtomed haunt for all that, but made meanes by a certaine tree to clamber over and get to the fore-ſaid ſalt-fiſh; and never could he be taken in the manner nor diſcovered, but that the dogges by their quicke ſent found him out and bayed at him: for as he returned one night toward the ſea, they aſſailed and ſet upon him on all ſides, and therewith raiſed the foreſaid keepers, who were affrighted at this ſo ſodaine an alarme, but more at the ſtraunge ſight which they ſaw. For firſt and foremoſt this Polype fiſh was of an unmeaſurable and incredible bigneſſe: and beſides, hee was beſmeared and beraied all over with the brine and pickle of the foreſaid ſalt-fiſh, which made him both hideous to ſee to, and alſo to ſtinke withall moſt ſtrongly. Who would ever have looked for a Polype there, or taken knowledge of him by ſuch markes as theſe? Surely they thought no other, but that they had to deale and encounter with ſome monſter: for with his terrible blowing and breathing that he kept, he drave away the dogges, and otherwhiles with the ends of his long ſtringed winding feet, he would laſh and whip them; ſometimes with his ſtronger clawes like armes he rapped and knocked them well and ſurely, as it were with clubs. In ſumme, he made ſuch good ſhift for himſelfe, that hardly and with much adoe they could kill him, albeit he received many a wound by trout-ſpeares which they launced at him. Well, in the end his head was brought and ſhewed to Lucullus for a wonder,

der, and as bigge it was as a good round hogſhead or barrel that would take and containe 15 Amphores: and his beards (for ſo Trebius tearmed his clawes and long-ſtringed feet) carried ſuch a thicknes and bulke with them, that hardly a man could fathom one of them about with both his armes, ſuch knockers they were, knobbed and knotted like clubs, and withall 30 foot long. The concavities within them, and hollow veſſels like great baſons, would hold four or five gallons apeece: and his teeth were anſwerable in proportion to the bignes of his bodie. The reſt was ſaved for a wonder to be ſeen, and waighed 700 pound weight."

It may be added that the vague and uncertain deſcriptions of the northern animal called the Kraken or Korven, may perhaps owe their origin to exaggerated accounts of ſome uncommonly large ſpecimens of this animal ſeen in the northern ſeas.

PAPILIO LEILUS.

Character Genericus.

Antennæ apicem verſus craſſiores, ſæpius clavato-capitatæ.

Alæ (ſedentis) erectæ ſurſumque conniventes (volatu diurno.)

Lin. Syſt. Nat. p. 744.

Character Specificus, &c.

PAPILIO alis caudatis concoloribus nigris, faſcia lineiſque viridibus nitentibus numeroſis.

Lin. Syſt. Nat. p. 750.
Eq. Achiv.

Merian. Sur. t. 29.
Seb. muſ. 4. *t.* 36. *f.* 1. 2. 3. 4.
Cram. 8. *t.* 85. *f.* E. F. & C. D.

Multas Americæ meridionalis partes nec non inſularum Americæ adjacentium incolit pulcherrimum hoc inſectum. Coloribus aliquatenus variat. Specimina nempe ab inſulis delata plus habent coloris aureo-cuprei, minus autem leviter cærulei, in alarum oris. Futuris forſan phyſicorum diſquiſitionibus

bus poterit probari, insecta insularia et Americana revera specie differre, quamvis eadem fere sit utrisque facies, et affinia admodum sibi invicem videantur. Larvam seu erucam prima omnium descripsit Domina Merian, quæ asserit setas longas crassasque quibus obtegitur vix ac ne vix duritie cessisse totidem filis ferreis. Larva gramineo-viret; chrysalis fusca est, nigro maculata.

LEILUS.

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Generic Character.

Antennæ thickening towards the upper part and generally terminating in a knob.

Wings (when ſitting) erect and meeting upwards. (Flight diurnal.)

Specific Character, &c.

Caudated black BUTTERFLY, with ſhining-green band and numerous narrow ſtripes: both ſurfaces of the wings nearly ſimilar in color.

Merian's Surinam Inſects. pl. 29.
Kleeman inſ. 1. *pl.* 2. *f.* 1.
Aubent Pl. Enl. 71. *f.* 1.

This beautiful Inſect is a native of many parts of South America, as well as of ſome of the Weſt Indian iſlands. It admits of ſome variety in point of colors: the Weſt Indian ſpecimens having more of the coppery or gilded tinge, and leſs of the pale-blue on the edges. Future obſervations may alſo prove that the two kinds may in reality differ from each

each other, though ſo extremely nearly allied in their general appearance. The caterpillar or larva was firſt deſcribed and figured by Madam Merian, who aſſures us that the long and thick briſtles with which it is beſet are nearly as ſtrong as iron wires: it is of a green color; and the chryſalis is brown, ſpotted with black.

TURBO PETHOLATUS.

Character Genericus.

Animal Limax.
Teſta univalvis, ſpiralis, ſolida.
Apertura coarctata, orbiculata, integra.
Lin. Syſt. Nat. p. 1232.

Character Specificus, &c.

TURBO teſta imperforata ovata lævi nitida, anfractibus ſurſum ſubangulatis.
Lin. Syſt. Nat. p. 1233.

COCHLEA petholata.
Rumpf. t. 19. *f.* D. & 5. 6. 7.

COCHLEA variegata.
Argenv. Conch. t. 6. *f.* K.

Liſt. Conch. t. 584. *f.* 39.
Gualt. teſt. t. 64. *f.* F.
Klein. oſtr. t. 2. *f.* 51.

Maria Indica et Americana incolit Turbo petholatus, magnitudine vera in tabula depictus.

THE

VARIEGATED TURBO.

Generic Character.

Animal ſnail-ſhaped.
Shell univalve, ſpiral, ſolid.
Aperture orbicular.

Specific Character, &c.

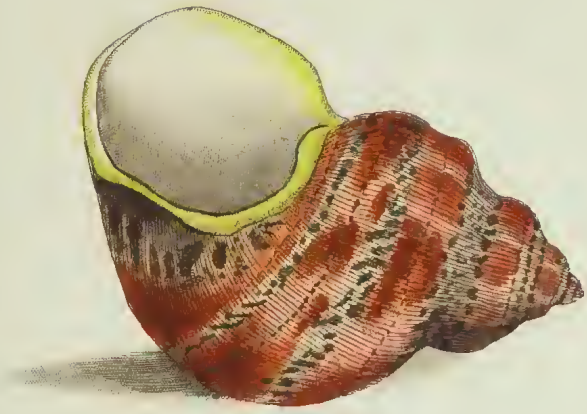
TURBO with ovate gloſſy variegated ſhell; the whirls inclining to an angular form on the upper part.

The variegated TURBO.

The ribband TURBO.

The parti-coloured American SNAIL.

This elegant ſhell is a native of the Indian and American ſeas, and is repreſented on the plate in its natural ſize.



Publ. Nov. 1829 by Alexander

FRINGILLA TRISTIS.

Character Genericus.

Roſtrum conicum, rectum, acuminatum.
Lin. Syſt. Nat. p. 317.

Character Specificus, &c.

FRINGILLA flava, fronte nigra, alis fuſcis.
Lin. Syſt. Nat. p. 320.
Lin. Syſt. Nat. Gmel. p. 907.

CARDUELIS Americana.
Briſſ. av. 3. p. 64.
Edw. av. t. 274.

Fringilla triſtis quam magnitudine vera repræſentat tabula in variis Americæ Septentrionalis partibus conſpicitur. Femina ſupra olivacea, caret fronte nigra.

THE

AMERICAN GOLDFINCH.

Generic Character.

Bill perfectly conic, ſlender towards the end, and very ſharp-pointed.

Specific Character, &c.

Yellow FINCH, with black front and wings.

American GOLDFINCH.
Edw. pl. 274.

Le CHARDONNERET jaune.
Buf. ois. 4. p. 212.
Pl. enl. 202. *f.* 2.

Golden FINCH.
Penn^t. Arct. Zool. p. 371.

The American Goldfinch, which the plate repreſents in its natural ſize, is found in various parts of North America. The female is olive-coloured above, and wants the black ſpot on the front.

GASTROBRANCHUS CÆCUS.

Character Genericus.

Spiracula duo ventralia.

Bloch. ichth. 12. *append.* p. 50.

Character Specificus, &c.

GASTROBRANCHUS oculis carens.

Bloch. ichth. 12. *append.* p. 51.

MYXINE glutinosa.

Lin. Syst. Nat. p. 1080.

Lin. Syst. Nat. Gmel. p. 3082.

Mus. Ad. Frid. 1. p. 91. *t.* 8. *f.* 4.

Myxines glutinosæ nomine vermibus adjunxit Linnæus animal in tabula depictum, a Blochio rectius piscibus annumeratum, instituto ei novo genere, quod dicitur *Gastrobranchus*. Mirum est Linnæum alioſque physicos ab hoc non discriminasse Lampetram cæcam Willughbeii; quam quoque repræsentari ab effigie quæ exstat in Pennanti Zoologia Britannica existimat Blochius, nequaquam vero Gastrobranchum nostrum, seu veram Myxinem glutinosam Linnæi. Longum esse Gastrobranchum seu Myxinem paucas uncias tradunt Linnæus aliique.

In Muſeo tamen Britannico conſpici poſſit ſpecimen fere æquale mediocri anguillæ; et in celeberrimi Joſephi Bankſii pinacotheca, in qua nempe reponuntur icones animalium auſtralium, depingitur Gaſtrobranchus communi anguillæ certe non minor. Veriſimile eſt igitur magnitudine multum variare, et Europeis longe majora eſſe antarctica ſpecimina. Adeo glutine abundat mirum hoc animal, ut aquam marinam gelatam brevi reddat. Generatur in maribus tum ſeptentrionalibus tum auſtralibus. Privatur omnino oculis: quod fortaſſe Linnæum alioſque in errorem duxit, quibus nihil differre viſum eſt inter hoc et Lampetram cæcam Willughbeii. Lampetræ tamen non deſunt prorſus oculi licet minimi ſint. Plane igitur conſtat genus *Myxenem* a vermibus debere ablegari; ſupra enim vidimus ad piſces referendum eſſe, ad piſces nempe cartilageos, ſive *nantes* Linnæi.

Figura ſecunda monſtrat partem anticam diſſectam et apertam, ut de formatione duplicis ſeriei dentium, nec non de ſimplici dente curvato in medio palati ſuperioris melius et commodius poſſit inquiri.

Publ.d by A. Dodder Dec.r 98. RV.

THE

GLUTINOUS GASTROBRANCHUS.

Generic Character.

Mouth terminal, furniſhed with cirri or beards.
Teeth in a double pectinated row on each ſide:
Upper tooth ſingle, ſharp, in the roof of the mouth.
Body anguilliform, carinated beneath by a ſoft fin.
Two *Ventral Spiracula.*

Specific Character, &c.

Eel-ſhaped GASTROBRANCHUS without eyes.

The Glutinous HAG.
*Penn*t. *Zool. Brit.* 4. p. 33.

The HAG-FISH, or Slime-Worm.

Der BLINDFISCH.
Bloch. ichth. t. 413.

The animal which forms the ſubject of the preſent plate was by Linnæus ranked amongſt the *Vermes*, under the title of *Myxine glutinoſa.* Dr. Bloch however has with great propriety given it its true rank

rank amongſt Fiſhes, and has inſtituted for it the genus *Gaſtrobranchus*. It is remarkable that a very different animal has by Linnæus and others been confounded with it: viz. a ſmall ſpecies of Petromyzon or Lamprey; (Lampetra cæca. Will. ichth.) The figure alſo in the Britiſh Zoology is, according to Dr. Bloch, by no means the Gaſtrobranchus, (Myxine glutinoſa, Lin.) but the above-mentioned ſmall ſpecies of Petromyzon. Linnæus and others have alſo deſcribed the Gaſtrobranchus (Myxine) as ſeldom exceeding the length of a few inches; yet in the Britiſh Muſeum is a ſpecimen not leſs than a middle-ſized eel: and in a collection of drawings of South-Sea animals in the poſſeſſion of Sir Joſeph Banks, a figure occurs of the ſame animal at leaſt as large as a common eel. We may therefore conclude that it varies very greatly in ſize, and that the European ſpecimens fall far ſhort of the Antarctic ones. When placed in a veſſel of ſea water this fiſh ſoon renders it gelatinous, being of an uncommonly glutinous nature. It is found in the Mediterranean and the northern ſeas, as well as in thoſe of the ſouthern hemiſphere. It is entirely deſtitute of eyes, which ſeems to have been the reaſon of Linnæus and others having confounded it with the Lampetra cæca of Willughby above mentioned, in which fiſh however there are eyes, though very ſmall ones.

It muſt be unneceſſary to add that the genus *Myxine* amongſt the Vermes muſt be now exploded; the animal belonging, as we have ſeen, to the diviſion of Cartilaginous Fiſhes, or *Nantes* of Linnæus.

The

The ſecond figure repreſents the fore-part of the animal opened, in order to ſhew the ſtructure and ſituation of the double rows of teeth; as well as the ſingle curved tooth in the middle of the roof of the mouth.

SEPIA LOLIGO.

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Character Genericus.

Corpus carnoſum: vagina excipiente pectus, ad cujus baſin tubus.

Brachia (præter bina tentacula pedunculata in pleriſque) octo interius adſperſa cirris verrucoſis.

Os inter brachia, terminale, corneum.

Lin. Syſt. Nat. Gmel. p. 3149.

Character Specificus, &c.

SEPIA corpore ſubcylindrico ſubulato, cauda ancipiti-rhombea.

Lin. Syſt. Nat. p. 1096.

LOLIGO.

Rond. piſc. 506.

LOLIGINIS ſpecies maxima.

Seb. Muſ. 3. p. 7. *t.* 4.

In magnam Interdum creſcit molem Sepia Loligo; minor tamen eſt Sepia octopodia; a qua etiam facile ſecernitur corpore magis elongato. Suppeditavit huic Natura nec non aliis nonnullis congeneribus receptaculum magnum internum, foramine extrinſecus

ſecus aperto: continetur in hoc ſacculo fluidum quoddam nigrum et ſpiſſum, quo, ſi turbata ſit, ſtatim emiſſo, aquam infuſcare, et e conſpectu fugere dicitur. Utebantur antiqui hoc ſucco, atramenti vice: putatque celeberrimus Swammerdamus atramentum Sinenſe ſeu quod Indicum vulgo dicitur, ex hoc ipſo liquore ſpiſſato concoqui, additis certis ſuffimentis, aliiſque ejuſmodi. Affirmant contra nonnulli ſuccum, quem emittit Loligo, in atramentum ſcriptorium apte et utiliter non poſſe converti; et ut aliquid ejus ope plane et probe literis mandetur, ſumma peritia opus eſſe. Quibus fortaſſe aſſentiendum ſit, ſi liquor recens fuerit extractus: ſed ſi prius ſatis exſiccatus, contritus fuerit et in aqua ſolutus, de calamo facilius dilabetur; et probabile omnino videtur quod opinatur Swammerdamus; præcipue cum certum ſit atramenti Indici modicam quantitatem, ſi poſt ſolutionem in vaſe aliquo ſervetur, intra paucos dies fœtorem non levem emittere; quod ſatis indicare videtur animalem originem.

Prædatoria eſt indole Sepia Loligo, ut et aliæ congeneres; veſciturque præcipue teſtaceis et molluſcis variis. Color generalis fuſco-rubet, oculis læte cæruleis. Non prorſus ſupervacaneum ſit notare Sepias ab antiquis Polypos fuiſſe dictas; polypoſque parvulos aquaticos, quos Hydras hodie nuncupant phyſici, facie ſeu habitu generali ſepiis quodammodo ſimiles eſſe; conſperguntur enim hydrarum tentacula verrucis pluribus quæ viſibiles ſunt ope microſcopii, quaſque veriſimile eſt eodem fungi munere quo ſepiarum acetabula. Addendum porro eſt, vice oſſis quod ſepia officinalis ſeu communis in corpore habet,

bet, inſtrui hanc ſpeciem cartilagine quadam enſiformi, hyalina, longa; quæ a quibuſdam phyſicis quaſi ſpecies Pennatulæ deſcripta et depicta eſt; a Seba nempe in tertio volumine theſauri rerum naturalium p. 40. tab. 16. In editionibus quoque nonnullis prioribus ſyſtematis naturæ Linnæani, falſo reponebatur in genere Pennatulæ.

THE

CALAMARY.

Generic Character.

Body fleſhy, ſheathing the breaſt, which is furniſhed at its baſe with a tubular opening.

Arms eight, (and in moſt ſpecies two pedunculated tentacula,) beſet with numerous ſuckers or acetabula.

Head ſhort; *Eyes* large: *Mouth* reſembling a Parrot's beak.

Specific Character, &c.

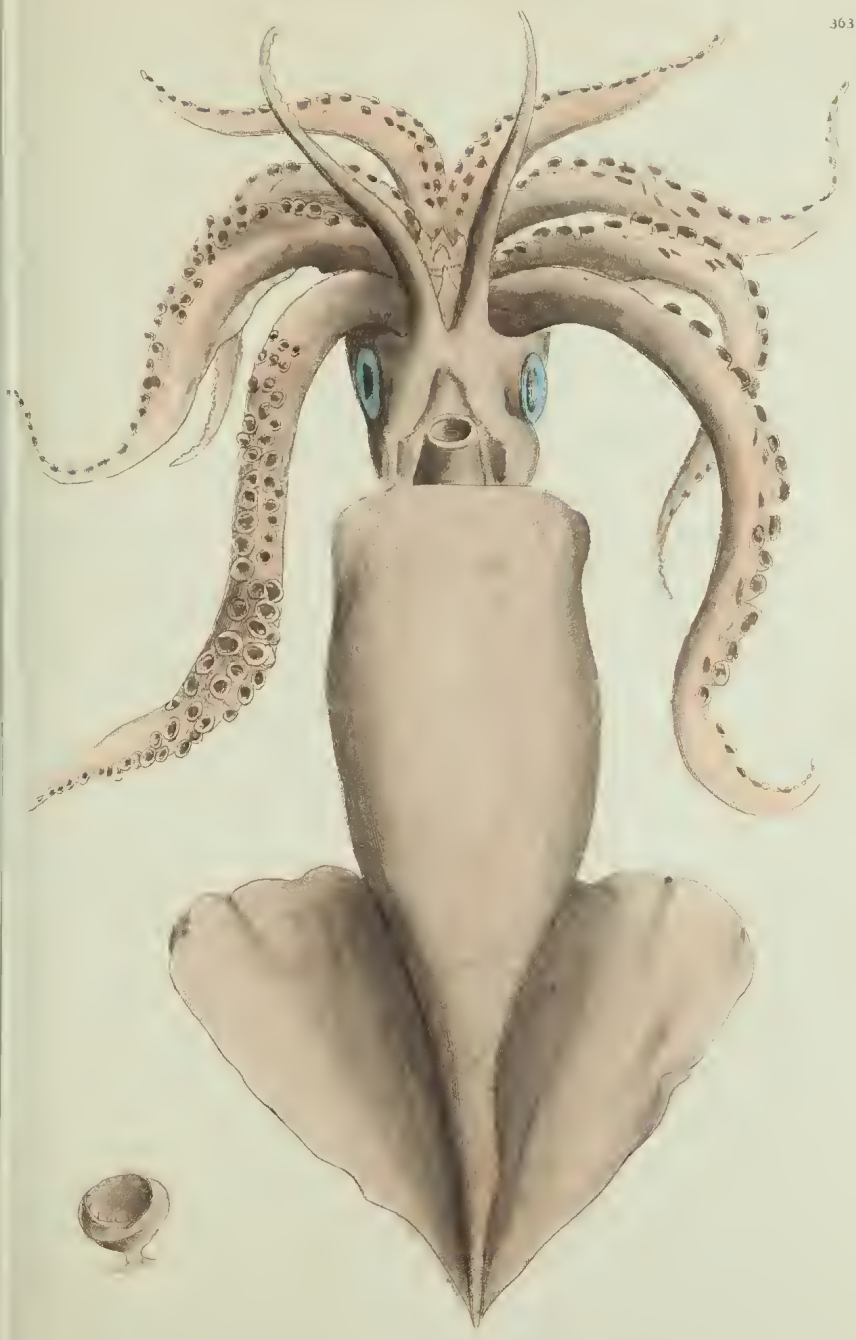
SEPIA with ſubcylindric ſubulate body and flattiſh ſharp-edged rhomboid tail.

The CALAMARY or Ink-Fiſh.

The INK-SEPIA or Loligo.

The Ink CUTTLE-FISH.

This ſpecies is readily diſtinguiſhed from the S. octopodia or eight-armed Cuttle-Fiſh by its more elongated form: in ſize it is inferior to that animal, though ſometimes ſeen of a very conſiderable magnitude.



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nitude. It is provided, like ſome others of this genus, with a large receptacle or internal pouch containing a peculiar ſecretion or fluid of a black color and of a thickiſh conſiſtence, and opening outwardly by a tubular foramen. When purſued it ejects a quantity of this fluid, which mixing with the ſurrounding water, is ſuppoſed to facilitate the eſcape of the animal by concealing it from view. This liquor appears to have been uſed by the ancients for the purpoſe of ink. The ſagacious Swammerdam alſo declares himſelf of opinion that the celebrated compound formed by the Chineſe, and commonly termed Indian ink, is no other than the black fluid before mentioned in an inſpiſſated ſtate, with the addition of certain perfumes, &c. By others however it is affirmed that the liquor of the Loligo is not very convenient for the purpoſe of an ink, and requires a conſiderable degree of dexterity in its uſe. This perhaps may be the caſe with the recent liquor, but when dried and again ground or diſſolved in water, it may become much more eaſily manageable, and it ſhould ſeem that Swammerdam's theory may be highly probable; more eſpecially as Indian ink diſſolved in water and kept in any conſiderable quantity, in the ſpace of a few days acquires a very high degree of fœtor, which clearly ſeems to indicate an animal ſubſtance. Like the reſt of the Sepiæ, the Loligo is of a very predacious nature, and feeds on Shell-fiſh and various Molluſca. Its general color is a reddiſh brown: the eyes of a beautiful blue. It may not be improper to obſerve that the different ſpecies of this genus were the Polypi

of

NATIONAL MUSEUM OF VICTORIA

of the ancients, and it is alſo highly probable that the ſmall freſh-water animals called Hydræ or Polypes in modern natural hiſtory, are conſiderably allied in general habit to the Sepiæ, and their arms or tentacula when microſcopically examined, ſeem beſet with numerous verrucæ which probably act in the ſame manner as the acetabula or ſuckers on thoſe of the Sepiæ. It may alſo be obſerved that the Loligo, inſtead of the friable calcarious bone with which the common or officinal Cuttle-Fiſh is furniſhed, has on the contrary a long, lance-ſhaped, tranſparent cartilage in place of the bone; and this cartilage has ſometimes been deſcribed and figured as a ſpecies of pennatula, under which name it may be found in the third volume of Seba's Theſaurus, p. 40. pl. 16. and even in ſome of the earlier editions of the Syſtema Naturæ of Linnæus it was erroneouſly placed under that genus.

MONOCULUS PULEX.

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Character Genericus.

Pedes natatorii.
Corpus cruſta tectum.
Oculi (pleriſque) approximati, teſtæ innati.
Lin. Syſt. Nat. p. 1057.

Character Specificus, &c.

MONOCULUS antennis dichotomis, cauda inflexa.
Lin. Syſt. Nat. p. 1058.

PULEX aquaticus.
Schaeff. monogr. t. 1. *f.* 1—8.

Daphnia PULEX.
Mull. zool. dan. prod. 2400.

In ſtagnis fere omnibus generatur Monoculus Pulex. Interdum fit ut ipſæ aquæ ab animalculorum numero rubeſcant. Movetur quaſi ſubſultim; quam ab cauſam magnitudini adjectam, antiquioribus nonnullis phyſicis placuit pulicem aquaticum nominare. Si microſcopio examinetur, vix ullis cedit monoculis vel pulchritudine vel ſingulari partium conformatione; cumque pellucida ſit teſta, evidenter apparent

apparent membra quoque interna. Oviparum eſt animalculum, et in ipſo parente incluſa ova non raro datur contemplari. Depingitur in tabula tum vera magnitudo, tum aucta. Variat color; interdum fere albidus, ſeu ex albido flaveſcens: interdum fuſcus, vel rubro-ſaturatior. Eſt etiam ubi ſubviret.

ERRATUM.

Page 14 of this Sheet, firſt line, for *probable* read *remarkable*.

Pub.d Dec.r 98 by J.& J. Nodder.

THE

FLEA MONOCULUS.

Generic Character.

Feet formed for ſwimming.
Body covered by a cruſtaceous ſhell.
Eyes (in moſt ſpecies) approximated.

Specific Character, &c.

MONOCULUS with dichotomous antennæ and inflected tail.

The Flea MONOCULUS or Water-Flea.

The WATER-FLEA with branched horns.
Baker. Empl. for Micr. p. 302.
pl. 12. *f.* 14.

The Monoculos Pulex, one of the moſt elegant ſpecies of this genus, is an inhabitant of almoſt every ſtagnant water, in which it is ſometimes ſo very numerous as to diffuſe a reddiſh tinge through the whole body of the water. The ſize of this animal, with its ſtarting kind of motion, has induced many of the more ancient writers on natural hiſtory to call it by the title of the water-flea. Few of the Monoculi can exceed it in the beauty and ſingularity of

its appearance when microſcopically examined; the tranſparency of the ſhelly covering admitting a moſt admirable view of the ſeveral internal parts. This animal is viviparous, and it frequently happens that the included eggs may be plainly perceived while contained within the parent animal. In the plate it is repreſented moderately magnified, as well as in its natural ſize. In color it varies, being ſometimes merely whitiſh or very pale yellowiſh-brown; at other times brown, or even ſtrongly tinctured with red, and ſometimes it is found of a greeniſh hue.

ORIOLUS HÆMORRHOUS.

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Character Genericus.

Roſtrum conicum, convexum, acutiſſimum, rectum: mandibula ſuperiore paulo longiore, obſolete emarginata.

Lingua bifida, acuta.

Pedes ambulatorii.

Lin. Syſt. Nat. p. 160.

Character Specificus, &c.

ORIOLUS niger, roſtro flavo, uropygio phœniceo.

ICTERUS niger, uropygio coccineo.

Briſſ. av. 2. p. 98. *t.* 8. *f.* 2.

ORIOLUS hæmorrhous.

Lin. Syſt. Nat. Gmel. p. 387.

Merulæ vulgari magnitudine æqualis Oriolus hæmorrhous in America meridionali generatur; illumque a congeneribus diſcriminat plaga læte phœnicea, qua decoratur pars dorſi inferior, cum reliqua avis nigret, roſtro flavo-pallente excepto.

THE

RED-RUMPED ORIOLE.

GENERIC CHARACTER.

Bill conic, convex, very ſharp-pointed, ſtrait: the upper mandible rather longer than the lower and ſlightly emarginated.

Tongue bifid, ſharp-pointed.

Feet formed for walking.

SPECIFIC CHARACTER, &c.

Black ORIOLE, with yellow bill and crimſon rump.

Red-rumped ORIOLE.

Lath. ſyn. 1. p. 420.

Le CASSIQUE rouge.

Briſſ. orn. 2. p. 98. *pl.* 8. *f.* 2.

Le CASSIQUE rouge du Breſil.

Buf. ois. 3. p. 238. *Pl. enl.* 482.

This ſpecies, which is about the ſize of a blackbird, is a native of South America: it is readily diſtinguiſhed from the reſt of its congeners by the rich

rich and vivid crimſon which adorns the lower part of the back, while all the reſt of the bird is of a deep gloſſy black, except the bill, which is of a pale yellow.

SCIÆNA CIRROSA.

Character Genericus.

Squamæ arcte adhærentes.
Caput ſquamoſum.
Dorſum dipterygium.

Bloch. ichth. 9. p. 27.

Thoracici.

Character Specificus, &c.

SCIÆNA flaveſcens, ſubtus ſubargentea, lineis longitudinalibus obliquis nigricantibus, mento barbato.

SCIÆNA cirroſa. S. maxilla ſuperiore longiore, inferiore cirro unico.

Lin. Syſt. Nat. p. 481.

SCIÆNA cirro mentali.

Bloch. ichth. 9. p. 41. *t.* 300.

Præcipuam diſtinctionis notam in Sciæna genere docuit Linnæus eſſe foſſulam quandam dorſualem in longitudinem ductam, in qua quieſcere ad libitum poſſet pinna dorſi, et quaſi abſcondi. Blochio autem,

tem, qui compertum habuit non modo evidentiorem eſſe hanc notam in aliis multis piſcibus, ſed et majori parti etiam Sciænarum Linnæanarum omnino deeſſe, viſum eſt alium characterem genericum ſeligere. In pulcherrimis merito habetur ſpecies quæ in tabula depingitur. Maria incolit Europæa et Americana, quaſi pedali ut plurimum longitudine.

Pub.d by J.J. Nodder Jany. 1799.

THE

BEARDED SCIÆNA.

Generic Character.

Scales ſtrongly fixed.
Head ſcaled.
Back with two fins.

Thoracici.

Specific Character, &c.

Yellowiſh SCIÆNA, ſubargenteous beneath, with longitudinal blackiſh ſtripes, and a cirrus or beard on the under jaw.

L'UMBRE.

Rond. Hiſt. de Poiſſ. p. 120.
Will. ichth. p. 299. *t.* p. 19.

The genus Sciæna was characterized by Linnæus principally from the circumſtance of a ſort of longitudinal cavity or *foſſula dorſalis* into which the back fin might occaſionally be ſo far depreſſed as to be in a manner concealed from view. Dr. Bloch however has obſerved that this character, excluſive of its being found in a more ſtriking degree in ſeveral

ſeveral other fiſhes, does by no means pervade the major part even of the Linnæan Sciænæ themſelves; many of which are deſtitute of it. Dr. Bloch therefore has taken the generic character from a different circumſtance. Among the moſt elegant ſpecies may be numbered that repreſented on the plate. It is a native of the European and American ſeas, and is commonly found of about a foot in length.

RANA BICOLOR.

Character Genericus.

Corpus tetrapodum, ecaudatum, nudum.
Lin. Syſt. Nat. p. 354.

Character Specificus, &c.

RANA ſupra cærulea, ſubtus ochracea, pedibus fiſſis, digitis orbiculato-dilatatis.

RANA pedibus fiſſis, palmis tetradactylis, plantis pentadactylis, omnibus orbiculato-dilatatis, ſuperne cyanea, inferne fulva.
Schloſſ. & Boddaert. de ran. bicol. p. 19.

RANA bicolor.
Lin. Syſt. Nat. Gmel. p. 1052.

In Africa? generatur animal cujus veram magnitudinem oſtendit tabula, non tam formæ elegantia inſigne quam colorum. Pedes ſimiles fere pedibus ranæ arboreæ; ſingulis nempe digitis orbiculato-dilatatis et complanatis. A Domino Schloſſer primum

mum deſcripta eſt hæc ſpecies, qui adjecit quoque deſcriptioni præſtantem iconem. Jactat Muſeum Britannicum eximium ſpecimen unde depicta eſt hæc noſtra figura.

R.Y.

Pub.d by J.B. Nodder Jan.y 1799.

THE

BLUE-AND-YELLOW FROG.

Generic Character.

Body four-footed, naked, without tail.

Specific Character, &c.

Blue FROG, ochre-coloured beneath; with unwebbed feet, and flattened orbicular toes.

Blue-and-yellow FROG.

This animal, more remarkable for the elegance of its colors than its form, is a native of Africa? and is repreſented in its natural ſize oń the annexed plate. The feet are formed nearly in the ſame manner as thoſe of the rana arborea or tree frog; the toes being of a flattened orbicular ſhape. This ſpecies was firſt deſcribed by Dr. Schloſſer, who has accompanied his deſcription by an excellent figure. The repreſentation here given is from a fine ſpecimen in the Britiſh Muſeum.

MONOCULUS APUS.

Character Genericus.

Pedes natatorii.
Corpus cruſta tectum.
Oculi (pleriſque) approximati, teſtæ innati.
Lin. Syſt. Nat. p. 1057.

Character Specificus, &c.

MONOCULUS teſta convexa, antice rotundata, poſtice truncata, cauda biſeta.

APUS cancriformis.
Schæff. monogr. t. 1—6.

MONOCULUS Apus.
Lin. Syſt. Nat. p. 1058.

BINOCULUS paluſtris.
Müll. zool. dan. prodr. 2047.

LIMULUS paluſtris.
Müll. entomoſt. p. 127.

Inter Monoculos Europæos quaſi gigas eminet Monoculus apus: manifeſta omnino ſunt tum branchiæ tum alia membra, quæ adeo exigua habent minores

minores congeneres, ut non nisi microscopii ope possint discerni. Genus Linnæanum *Monoculus* dictum disperserunt Fabricius, Geoffrius, Mullerus, et alii nonnulli in varia genera, ab oculis diverse sitis; qui in aliis adeo appropinquant, ut unicus oculus videatur.

Fatendum sane est Monoculi titulo species aliquas minus feliciter designari. Cum tamen eadem fere aut saltem similis sit generalis partium conformatio, melius visum est Linnæano nomine jam olim recepto genus distinguere, quam novis generibus, quæ paulo licentius instituisse videntur hodierni entomologi, lectorum animis dubitationem injicere.

Subvirens, ut plurimum, Monoculus apus, interdum subrubet, aut fusco-pallet. Rara hæc species, si cum aliis comparetur, quærenda est in stagnis majoribus, et aliis ejusmodi locis. Tabula eam ostendit vera magnitudine. In Actis Anglicis proba exstat hujus insecti effigies a Kleinio descripti, qui specimen Germanicum examinaverat; cui descriptioni adjicitur quoque historia ejusdem animalculi copiosissime reperti in magna aqua apud *Bexly common* in agro Cantuariensi; quam aquam penitus exsiccatam cum subito restituisset pluvia tonitralis, duorum dierum spatio dicitur ingentes iterum occupasse eorundem insectorum catervas.

Pub.d by F.D.Nodder Jan.y 1.st

THE

CANCROID MONOCULUS.

Generic Character.

Feet formed for ſwimming.
Body covered by a cruſtaceous ſhell.
Eyes (in moſt ſpecies) approximated.

Specific Character, &c.

MONOCULUS with convex ſhell rounded in front, truncated behind: the tail furniſhed with two briſtle-ſhaped proceſſes.

Le BINOCLE à queue en filets.
Geoff. Hiſt. abr. 2. p. 660. *pl.* 21. *f.* 4.

INSECTUM aquaticum, &c.
Phil. Tranſ. vol. 40. p. 150, *&c.*
pl. 1. *f.* 2.

This curious inſect is by far the largeſt of all the European Monoculi; exhibiting with great diſtinctneſs the numerous branchiæ and other parts which in the ſmaller ſpecies are only to be viewed by the aſſiſtance of the microſcope. The Linnæan genus Monoculus has by Fabricius, Müller, and others been

been ſubdivided into different genera on account of the diſpoſition of the eyes, which in ſome ſpecies are approximated, ſo as to appear as if ſingle, while in others they are remote from each other. It muſt be confeſſed that the title *Monoculus* is, with reſpect to many of the ſpecies, rather an unfortunate one; yet ſince the inſects which Linnæus has arranged under the genus agree ſufficiently in the general ſtructure of their ſeveral parts, it ſeems better to continue it as it firſt ſtood, than to create confuſion by the unneceſſary inſtitution of new genera; a fault which ſeems to be prevailing among modern entomologiſts. The Monoculus apus is generally of a greeniſh caſt, and ſometimes of a reddiſh or pale brown. It is rare in compariſon with many other ſpecies, and is found in large ponds and other ſtagnant waters. The plate repreſents it in its natural ſize. In the Philoſophical Tranſactions may be found a good figure of this inſect, with a deſcription by Klein, from a ſpecimen found in Germany; to which is added an account of the ſame animal diſcovered in great plenty in a pond on Bexly common in Kent. It is alſo added that the above-mentioned pond having been perfectly dried, and being ſuddenly filled during a heavy thunder-ſtorm, ſwarms of the ſame animal were again obſerved in it within the ſpace of two days.

CERTHIA VENUSTA.

Character Genericus.

Roſtrum arcuatum, tenue, ſubtrigonum, acutum.
Lingua acuta.
Pedes ambulatorii.

Lin. Syſt. Nat. p. 184.

Character Specificus.

CERTHIA viridi-aurea, fronte mento faſciaque pectorali violaceis, alis fuſcis, abdomine flavo.

Faſcia pectoralis violacea ſubtus nigro cincta: roſtrum pedeſque nigra.

Africæ regionem quæ *Sierra Leona* nominatur incolit hæc avicula, non antea, ut opinor, deſcripta, cujus magnitudinem naturalem oſtendit tabula. Specimen unde delineata eſt, nobiſcum perhumaniter communicavit Thomas Wilſon armiger, cui tranſmiſſum erat a Domino Joanne Lowes, Sierræ Leonæ chirurgo primario.

THE

LEONA CREEPER.

Generic Character.

Bill ſlender, incurvated, ſharp-pointed.
Tongue differing in the different ſpecies.
Toes three before; one behind: claws hooked and long.

Specific Character, &c.

Gold-green CREEPER, with the forehead, chin, and pectoral band violet: the wings brown: the abdomen yellow.

The violet-coloured pectoral band is bounded by black below: the bill and legs are black.

This bird, which ſeems to be a ſpecies hitherto undeſcribed, is a native of Sierra Leona, and is repreſented on the plate in its natural ſize. The ſpecimen was communicated by Thomas Wilſon, Eſq. to whom it was ſent by Mr. John Lowes, chief ſurgeon to the Engliſh ſettlement at Sierra Leona.

NEPA GRANDIS.

Character Genericus.

Roſtrum inflexum.
Antennæ breves.
Alæ quatuor cruciato-complicatæ: anterius coriaceæ.
Pedes anteriores cheliformes; reliqui quatuor ambulatorii.

Lin. Syſt. Nat. Gmel. p. 2120.

Character Specificus, &c.

NEPA teſtacea, ſcutello lævi, alis albis maculis veniſque flavis.

Lin. Syſt. Nat. p. 713.

NEPA ecaudata teſtacea flavo maculata.

Lin. Syſt. Nat. Gmel. p. 2120.

NEPA Surinamenſis.

Degeer. inſ. 3. p. 379.

Congenerum qui hactenus phyſicis innotuerunt ſpecies proculdubio maxima eſt cujus naturalem magni-

magnitudinem et colores oſtendit tabula. In America auſtrali generatur: primaque eam depinxiſſe videtur celeberrima Domina Merian in hiſtoria inſectorum Surinamenſium. Aquas incolit dulces, et inſecta prædatur minora. Major interdum eſt quam in tabula oſtenditur.

THE

GREAT NEPA.

Generic Character.

Beak inflected.

Antennæ ſhort.

Wings four; cloſing in a croſſed direction; co[illegible] ceous on their upper part.

Feet anterior cheliform; the remaining four formed for walking.

Specific Character, &c.

NEPA with brown wings variegated with yellow.

The great brown NEPA or Water-Scorpion.

The great Surinam NEPA.

This inſect, which the plate repreſents in its natural ſize, is by far the largeſt ſpecies yet diſcovered. It is a native of South America, and ſeems to have been firſt figured by the celebrated Madam Merian, who has introduced it into her Hiſtory of Surinam inſects. It is an inhabitant of freſh waters, and lives by preying on the ſmaller water inſects, &c. In ſize it ſometimes exceeds the figures here repreſented.

ANTHIAS SACER.

Character Genericus.

Caput totum ſquamoſum; operculo anteriore ſerrato.

Bloch ichth. 9. p. 86.

Character Specificus, &c.

ANTHIAS radio ſecundo pinnæ dorſalis longiſſimo.

Bloch. ichth. 9. p. 86. *t.* 315.

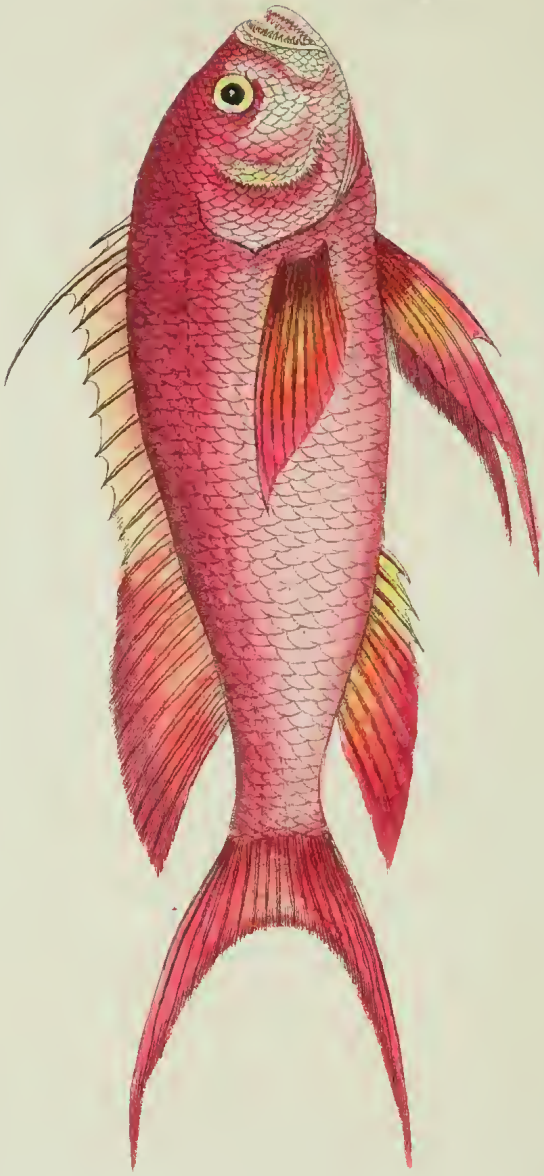
Labrus ANTHIAS.

Lin. Syſt. Nat. Gmel. p. 1283.

ANTHIAS Rondeletii.

Jonſt. de piſcib. p. 53. *t.* 16. *f.* 1.
Will. ichth. p. 325. *t.* x. 5. *f.* 3.

In mari Mediterraneo præcipue conſpicitur formoſus hic piſcis, pedali, ut plurimum, longitudine. Coloris eſt læte roſei.



THE

RED ANTHIAS.

Generic Character.

Head completely ſcaled: anterior gill-cover ſerrated.

Specific Character, &c.

Roſe-coloured ANTHIAS, with the ſecond ray of the dorſal fin extremely long.

The roſe-coloured ANTHIAS.

The crimſon ANTHIAS.

Le BARBIER.

Bonaterre, Encycl. Ichth. p. 105.
Rondel. Hiſt. Poiſſ. 1. p. 161.

This beautiful fiſh is principally found in the Mediterranean ſea. It grows to the length of about a foot, and is of an elegant bright roſe-color.

SPHINX NERII.

Character Genericus.

Antennæ ſubpriſmaticæ, utroque fine attenuatæ.
Lingua exſerta (pleriſque.)
Palpi duo reflexi.
Alæ deflexæ.

Lin. Syſt. Nat. Gmel. p. 2371.

Character Specificus.

SPHINX alis ſubangulatis viridibus; faſciis variis pallidioribus ſaturatioribus flaveſcentibuſque.

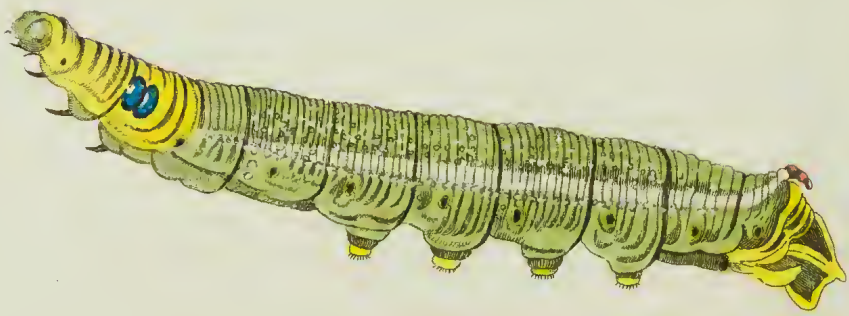
Lin. Syſt. Nat. p. 798.

Friſch. inſ. 7. *t.* 3
Schaeff. ic. t. 100. *f.* 3. 4.
Eſp. pap. 2. *t.* 4.
Cram. pap. 19. *t.* 244. *f.* D.

In pulcherrimis inſectis quæ generat Europa locum ſibi proculdubio vindicat animalculum in tabula depictum; in variis Germaniæ et Italiæ partibus repertum; præcipue vero in Italia. Larva ejus folia plantæ depaſcitur quam Linnæus *Nerium Oleandrum* nominavit.

Qui

Qui iconas hiſtoriam naturalem explicantes probe callent, ſentient mutuatos eſſe nos hanc noſtram tabulam a figuris tantum non vivis et ſpirantibus Domini Roeſelii; quas ſi exuperent, admodum deſudaturos putemus hodiernos pictores.



RV.

THE

OLEANDER SPHINX.

Generic Character.

Antennæ ſubpriſmatic, attenuated at each extremity.

Tongue (generally) exſerted.

Feelers two, reflex.

Wings deflected.

Specific Character, &c.

SPHINX with ſubangular green wings, varied with paler and deeper bands, and with a caſt of yellowiſh roſe-color.

The Oleander HAWK-MOTH.

This is unqueſtionably one of the moſt beautiful of the European inſects. It is found in ſeveral parts of Italy and Germany, but more particularly in the former. The caterpillar feeds on the leaves of the Nerium Oleander of Linnæus or roſe-flowered Oleander.

Thoſe who are converſant in the iconical part of natural hiſtory will eaſily perceive that the annexed plate

plate is copied from the ſpirited and beautiful figures of the admirable Roeſel, whoſe repreſentations, I believe, will not eaſily be ſurpaſſed by the attempts of any ſucceeding artiſts.

PLOTUS MELANOGASTER.

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Character Genericus.

Roſtrum rectum, acuminatum, denticulatum.
Facies mentumque nuda.
Pedes breves, palmati, omnibus digitis connexis.
Lin. Syſt. Nat. Gmel. p. 580.

Character Specificus, &c.

PLOTUS ſupra albo lineatus, abdomine nigro.

PLOTUS melanogaſter. Pl. capite lævi, abdomine nigro.
Lath. ind. orn. p. 895.
Lin. Syſt. Nat. Gmel. p. 580.

ANHINGA melanogaſter.
Penn^t. Zool. Ind. p. 22. *t.* 12.

Varias Indiæ partes incolit hæc avis, fluviorum præcipue amatrix, ramis inſidens ſuper aquas prominentibus, unde longum collum in piſciculos, aliaque quæ prædari ſolet, ejaculatur. Rectricum tota longitudo quaſi crenata videtur ſtriis plurimis tranſverſe impreſſis. Magnitudo avis eadem fere eſt atque Pelecani Graculi Linnæi.

THE

BLACK-BELLIED DARTER.

Generic Character.

Bill long, ſtrait, ſharp-pointed.
Noſtrils long and narrow, near the baſe of the bill.
Legs ſhort: toes four: all united by a web.

Specific Character, &c.

DARTER with the body ſtreaked with white above; the abdomen entirely black.

Black-bellied DARTER.

Lath. ſyn. 6. p. 624.

ANHINGA de Cayenne.

Pl. enl. 959.

This bird is a native of various parts of India, where it chiefly frequents rivers; generally ſitting on branches which cloſely overhang the water; from time to time darting down its long neck in order to ſeize the ſmaller fiſhes and other animals on which it preys. The tail feathers are marked throughout their whole length by a great number of tranſverſe undulations or furrows. The ſize of this ſpecies is nearly equal to that of a ſhag.

HELIX.

Character Genericus.

Animal Limax.
Teſta univalvis, ſpiralis, ſubdiaphana, fragilis.
Apertura coarctata, intus lunata, ſ. ſubrotunda: ſegmento circulo dempto.

Lin. Syſt. Nat. p. 1241.

HELIX RINGENS.

Character Specificus, &c.

HELIX teſta ſubcarinata imperforata convexa: apertura reſupinata; labio poſterius quadruplicato.

Lin. Syſt. Nat. p. 1243.

Liſt. conch. t. 99. *f.* 100.
Argenv. ed. 2. *t.* 28. *f.* 13. 14.

HELIX CAROCOLLA.

Character Specificus, &c.

HELIX fuſca, teſta imperforata utrinque convexa, labro tranſverſali albo.

HELIX

HELIX Carocolla. H. teſta carinata imperforata utrinque convexa.

Lin. Syſt. Nat. p. 1243.

LUCERNA antiqua.

Argenv. ed 2. p. 214. *t.* 8. D.
Knorr vergn. 4. *t.* 5. *f.* 2. 3.

Cum incolat, ut plurimum, genus numeroſum Helicis aquas dulces aut loca terreſtria, eo fit, ut careat craſſa illa et polita ſubſtantia qua teſtæ marinæ præcellunt. At quamvis non jactent pulchritudinem, multæ tamen ſunt ſpecies, quarum forma mira et inuſitata abunde doceat, habere Naturam fere incredibilem et veluti luſoriam varietatem. Inter ſpecies maxime notabiles numerari poſſunt Helix ringens, et Helix carocolla, quarum priorem denotant in tabula figuræ minores, poſteriorem figuræ majores. Ambæ in India innaſcuntur.

SNAIL.

GENERIC CHARACTER.

Animal reſembling a ſlug.
Shell ſpiral, ſub-pellucid.
Aperture ſemilunar.

RINGENT SNAIL.

SPECIFIC CHARACTER, &c.

Whitiſh HELIX, with yellowiſh-brown ſpots, and inverted ringent mouth.

INDIAN SNAIL with inverted ringent mouth.
Toothed INDIAN SNAIL.

LAMP SNAIL.

SPECIFIC CHARACTER, &c.

Brown imperforated HELIX, ſlightly convex on both ſides, with white tranſverſe lip.

The Indian LAMP-SNAIL.
La LAMPE antique.
Argenv. ed. 2. p. 216. *pl.* 8. D.

The genus Helix is more diſtinguiſhed by the number than the beauty of its ſpecies; which being moſtly either land or freſh-water inhabitants, have not that thick and gloſſy appearance which, in general, diſtinguiſhes thoſe ſhells which are natives of the ſea. It is however marked in many ſpecies by a high degree of ſingularity in point of form; and exhibits ſtriking examples of that ſtrange variety of ſhape into which Nature has arranged her productions. Amongſt the more remarkable ſpecies may be numbered the Helix ringens, repreſented by the ſmaller figures, and the Helix Carocolla, repreſented by the larger figures on the preſent plate. Both theſe ſhells are natives of India.

LONCHIURUS BARBATUS.

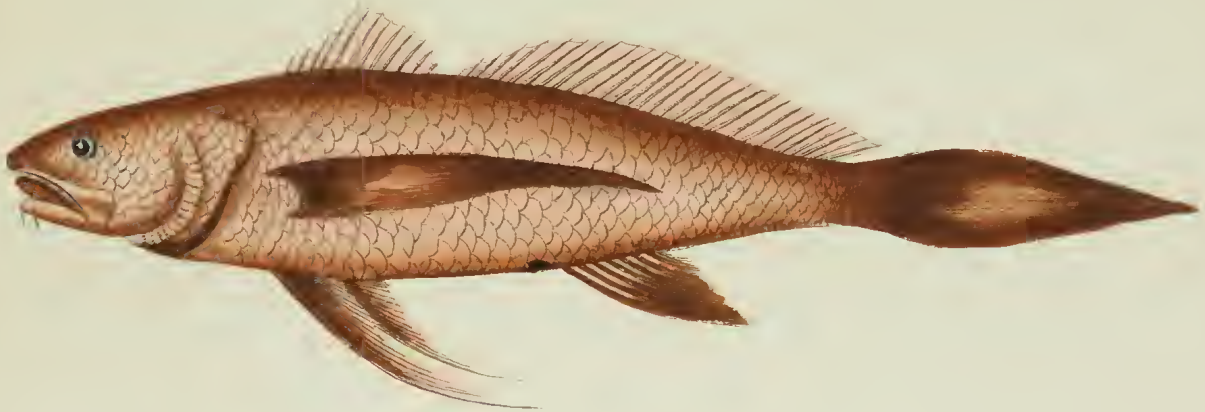
Character Genericus.

Pinnæ Ventrales diſcretæ : *Caudalis* lanceolata.
Bloch. ichth. 10. p. 119.

Character Specificus.

LONCHIURUS cirris duobus mentalibus.
Bloch. ichth. 10. p. 120. *t.* 360.
Piſces Thoracici.

Surinamiam incolit Lonchiurus barbatus, in fluviis præcipue degens. Longior raro eſt decem unciis, colore plerumque fuſco, quem plus minus ſaturatum habent diverſa ſpecimina.



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Pub.d by Nodder March 1799.

THE

BEARDED LONCHIURUS.

Generic Character.

Ventral Fins ſeparate: *Caudal Fin* lanceolate.

Specific Character, &c.

Brown LONCHIURUS with two cirri or beards under the chin.

The Lancet-Tail, or Bearded LONCHIURUS.

The bearded Lonchiurus is a native of Surinam, where it is generally found in rivers. It ſeldom exceeds the length of about ten inches, and is of a brown color, deeper or lighter in different individuals.

ALCYONIUM? BOTRYOIDES.

Character Specificus.

ALCYONIUM? (Spongia?) flavo-purpuraſcens, caule craſſo ſtupoſo, ſuperne ramoſo, ramulis denſiſſime congeſtis.

SPONGIA floribunda? Sp. amorpha, faſciculis ramoſis confluentibus paleaceo-tomentoſis, apice craſſioribus obtuſis.

Pall. el. zooph. p. 378. & p. 434 *addend.*

Pulchri et mirabilis Alcyonii quod neminem opinamur deſcripſiſſe, veram magnitudinem depinximus. Litora incolit Auſtralaſiæ, inſulæ præcipue quæ *Norfolcia* dicitur, et profunde ſub aquis merſum adhæret rupibus. Caulis ramique majores flavo-pallent, ramulis minoribus vivide rubentibus ſeu purpureis. Totum Alcyonium molliculum, ſed tenax; tactu durum, ſi exaruerit; et videtur componi omnino e fibris parvulis, vermiculatis, quarum extremitates acuminatæ. Racemi qui terminales vocantur conſtant e tubulis diviſis et ſub-diviſis, ſingulis quaſi in calycem leviter expanſum deſinentibus; bracteamque, ſeu foliolum florale (ut phyſice loquar) non male ſimulantibus, qui forſan munimento ſint illi

lli zoophyti parti quæ animalis eſſe videtur; organo nempe flori-formi, flavo-pallenti, ex iiſdem fibris vermiculatis confecto quibus reliquæ partes, ſed minoribus et confertioribus. Conſtat hæc quaſi corolla ſeu pars hydræformis e quinque vel ſex ſegmentis oblique acuminatis et convergentibus, foramen tubulatum habentibus, per quod ipſi Alcyonio nutrimentum poſſit adminiſtrari. Licet tamen conjicere, nec inepte, polypos ſeu hydras (ſi quæ revera ſint) intra tubulos quos ſupra memoravimus, ſeſe ſubduxiſſe, calycibus tantum ſive foraminibus externis in conſpectu relictis. A tranſverſo caulis ſegmento manifeſtum erit Alcyonium eſſe veluti cancellatum et leviter compactum, cavitatibus omnibus in longitudinem ab imo ad ſummum continuatis.

Elegans Alcyonii botryoidis ſpecimen Societati Linnæanæ Londinenſi donavit Dominus Paterſon, coloniæ Britannicæ apud Auſtralaſiam Subpræfectus.

Figura inferior monſtrat ſpecimen in ſpiritu vini diu aſſervatum: tertia partem racemi externi magnitudine aucti ut corolliformes terminationes manifeſtius pateant: quarta unam e fibris vermiculatis e quibus totum componitur, magnitudine auctam.

3

4

5.

CAULIFLOWER ALCYONIUM.

Specific Character.

Yellow-purple ALCYONIUM? (Sponge?) with thick, ſtupoſe ſtem, ramifying on the upper part; with very thickly-crowded branchets.

This elegant and ſingular Alcyonium ſeems a ſpecies hitherto undeſcribed, and is a native of the coaſts of New Holland, and more particularly of Norfolk Iſland; adhering to rocks at a conſiderable depth. The plate repreſents it in its natural ſize. The color of the ſtem and principal branches is pale yellow: of the ſmaller ramifications bright crimſon or purple. The ſubſtance of the whole is ſoftiſh, but tough; harſh to the touch in its dried ſtate; and ſeemingly compoſed entirely of ſmall, thickiſh, vermicular fibres with attenuated or ſharpened extremities. The terminal cluſters conſiſt of divided and ſubdivided tubular proceſſes, each ending in a calycular, ſlightly-expanded part, not ill reſembling a bractea, and forming a kind of guard for what appears to be the animal part of the zoophyte; viz. a kind of flower-ſhaped organ of a pale-yellow color, and compoſed of the ſame kind of thickiſh vermicular fibres with the reſt, but on a ſmaller ſcale, and ſomewhat more cloſely diſpoſed.

This

This flower, or polype-like part conſiſts of five or ſix obtuſely-acuminated, converging ſegments, leaving a tubular opening, through which the proper nutriment may be conveyed to the whole. It is however no improbable ſuppoſition that the real polypes, (if ſuch exiſt) may have withdrawn themſelves into the lower parts of their reſpective tubular branches, leaving only the external calyces in view. A tranſverſe ſection of this Alcyonium ſhews it to be of a cancellated or looſely-compacted fabric, the hollows all running in a longitudinal direction from the bottom upwards.

An elegant ſpecimen of this Alcyonium was ſometime ſince preſented to the Linnæan Society by Colonel Paterſon, Vice-Governor of the Engliſh ſettlement in New Holland.

The lower figure repreſents a ſpecimen preſerved for a conſiderable time in ſpirit of wine.

Fig. 3. A magnified view of one of the exterior ramifications, in order to ſhew the flower-like terminations.

Fig. 4. Magnified view of one of the vermicular fibres of which the whole is compoſed.

LANIUS COLLURIO.

Character Genericus.

Roſtrum rectiuſculum, dente utrinque verſus apicem, baſi nudum.

Lingua lacera.

Lin. Syſt. Nat. p. 134.

Character Specificus, &c.

LANIUS ferrugineus, capite cano, cauda faſciaque tranſoculari nigris.

LANIUS minor rufus, ſeu tertius Aldrovandi.

Raii ſyn. p. 18.

LANIUS Collurio. L. cauda ſubcuneiformi, dorſo griſeo, rectricibus quatuor intermediis unicoloribus, roſtro plumbeo.

Lin. Syſt. Nat. p. 136.

Notior longe in Anglia Lanius Collurio Lanio majore, ſeu *Excubitore* Linnæi, verno tempore ramis arborum altioribus juxta ſepes inſidet, nec propiorem populi prætereuntis adventum valde formidat. Femina mare paulo major, ſubtus ochraceo-pallido-albet, lineis plurimis tranſverſis fuſcis notata.

THE

RED-BACKED SHRIKE.

GENERIC CHARACTER.

Bill ſtraitiſh, with a tooth or ſmall proceſs on each ſide near the tip.

Tongue jagged.

SPECIFIC CHARACTER, &c.

Ferruginous SHRIKE, with grey head, black tail, and a black band acroſs the eyes.

L'ECORCHEUR.

Briſſ. 2. p. 151.
Buff. oiſ. 1. p. 302.

The Smaller SHRIKE, or Red-backed Butcher-Bird.

Leſſer BUTCHER-BIRD or Fluſher.

Will. orn. p. 88.

The Lanius Collurio is a much more common ſpecies in England than the great ſhrike or Lanius Excubitor of Linnæus. It is a bird of an audacious diſpoſition, and may often be ſeen in the ſpring

ſeaſon ſitting on the taller branches of trees, and about hedges, and is not eaſily diſturbed by a near approach. The female differs in having the under parts of a very pale ochre-color, with numerous tranſverſe lines or ſtreaks of a duſky caſt. It is alſo rather larger than the male.

TRACHICHTHYS AUSTRALIS.

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Character Genericus.

Caput antice rotundatum: Oculi magni: Os amplum, edentulum, deſcendens.

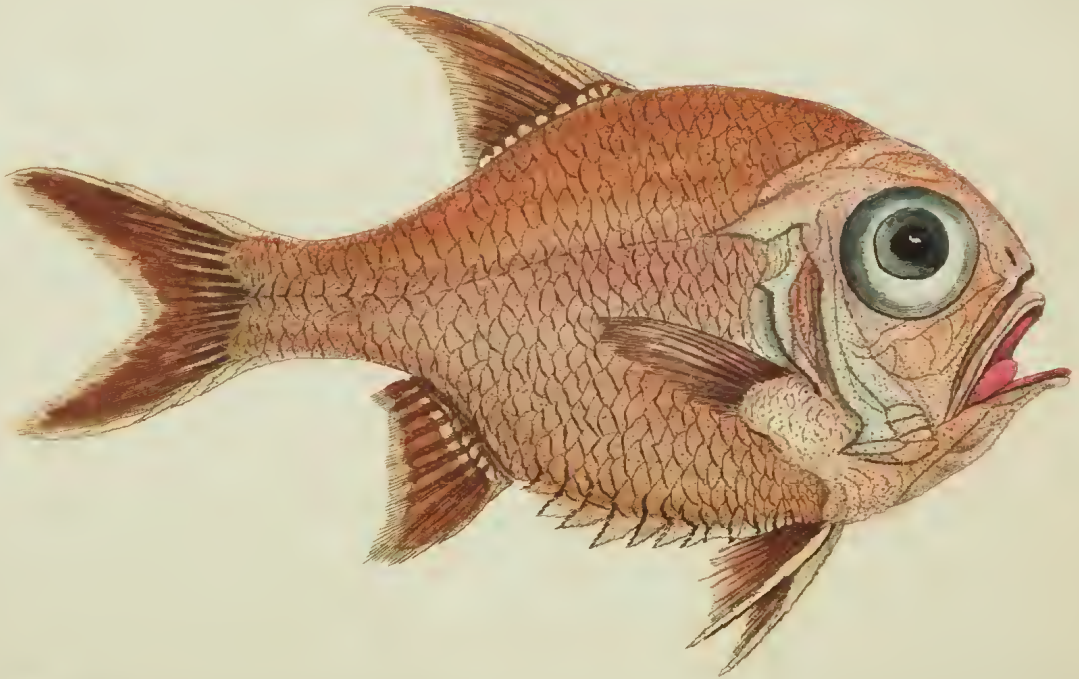
Membrana branchioſtega radiis octo, quorum quatuor inferiores margine ſcabri.

Squamæ ſcabræ: Abdomen carinato-cataphractum,

Cernere eſt in tabula veram piſcis miri magnitudinem. Corpus modice craſſum, præcipue a parte antica. Caput permagnum. Os deorſum ſe recludit fere perpendiculariter, linea tamen curvata; eoque clauſo, frontis ambitus perfecte ovatus. Oculi prægrandes: videturque iris vivo fuiſſe argentea, qualis ſolet pleriſque piſcibus. Os caret dentibus. Lingua modica, maxillæ inferiori quaſi adnata, cujus ad extremitatem fere pertingit. Branchiarum opercula partem habent ſuperiorem ſpina magna, ſcabra, inſtructam, ad baſin craſſiſſima. Partem quoque inferiorem occupat ſpina, ſed minor et brevior. Operculi utriuſque circumferentia paululum ſinuata eſt, prope medium prominentiis breviſſimis, ſubacutis: reliquum conſtat e quinque vel ſex lamellis in longitudinem ductis, quarum margines ſcabræ more corporis. Ex radiis qui quaſi octo ſunt in membrana branchioſtega, quatuor inferiores reliquis ſunt craſſiores,

craſſiores, lateribus ſcabris. Vix alius piſcis, ſi *cataphractos* excipiamus, veſtitu æque duro induitur; ſquamæ enim ſolidiſſimæ et quaſi cuti adnatæ, adeo arcte ſibi invicem affiguntur, ut vix poſſibile ſit forcipe unam evellere, niſi ipſius corii aliquid ſimul evellatur; qua in re ſimilitudo quædam eſt huic cum genere quod *Baliſtes* dicitur. Squamarum præterea generalis formatio reſpondet fere ſquamis Chætodontorum; extrinſecus enim terminantur quaſi fimbria parvularum et fortium ſpinarum, præter alias plures in ſuperficiem conſperſas. Differunt paululum a ſe invicem ſquamæ in diverſis partibus, et prope abdomen magis dilatantur. Abdomen ipſum carinatum et quaſi *cataphractum* eſt ſerie octo ſquamarum ſcabrarum et validarum, quarum unaquaque prominet in ſpinam brevem, retro tendentem, et carinam ſubtus efficientem, lateribus ſurſum continuatis quaſi quadrantem unciæ ab utroque latere abdominis. Squamæ quoque abdominis, (ut prius notavimus) hac in parte paulo latiores quam alibi gradatim decreſcunt verſus medium corporis. A cauda utrinque linea paululum aſſurgit ſimilis carinatæ: media enim pars ſingulæ ſquamæ altius prominet quam reliqua ſuperficies, ſquamaque ipſæ hoc in loco grandiores ſunt quam alibi. Præter hanc vix ulla viſibilis eſt linea lateralis. Pinna dorſalis quatuordecim habet radios quorum ſeptem poſteriores verſus apices dividuntur in molliores ramulos. Pinnæ pectorales tredecim habent radios. Ventrales ſeptem. Analis duodecim, pleriſque apud apices mollius ramuloſis. Caudam ore furcæ curvata conſtat fere e viginti quatuor radiis, quorum exteriores utrinque

utrinque validi ſunt ſeu ſpinoſi; reliqui quales ſunt in pinna anali. Pinnarum omnium, exceptis pectoralibus, tres primores radii validiſſimi ſunt, ſcabri, exterius tenuiter ſerrati; præcipue vero ventralium. Novum genus conſtituit Trachichtys Auſtralis, in piſcibus *thoracicis* Linnæi numerandum, iis nempe quorum pinnæ ventrales ſub pectoralibus ſitæ ſunt. Cum aſperrimam habeat ſuperficiem, *Trachichthyn* diximus; nomini autem triviali (donec melius phyſicis innotuerit) *auſtralis* inſerviat. E veteribus omnibus Linnæanis generibus, iis ſcilicet quæ in Syſtematis Naturæ editione duodecima continentur, nullum eſt cujus ad ſimilitudinem magis accedit quam ad *Percæ*. Litora incolit Auſtralaſiæ. Ex variis piſcibus quos ſpiritu vini conditos collegerat Dominus White coloniæ noſtræ Auſtraliacæ chirurgus primarius, in ſpecimen incidimus unde depicta eſt hæc noſtra effigies. Vidimus quoque apud Dominum White iconem Trachichthyos non ſane exquiſitam, ſatis tamen fidam ut ſpeciem definiat, et colorem genuinum demonſtret, læte ſcilicet carneo-ferrugineum, qui in ſpecimine aſſervato in fuſcum exoleverat. Partis mediæ omnium pinnarum ſaturatior eſt color quam in reliquo corpore: margines vero flaveſcunt.



Pub.d by B.P Nodder Apr.l 1799.

THE

SOUTHERN TRACHICHTHYS.

Generic Character.

Head rounded in front: Eyes large: Mouth wide, toothleſs, deſcending.

Branchioſtegous Membrane furniſhed with eight rays, of which the four lowermoſt are rough on the edges.

Scales rough: Abdomen cataphracted with large carinated ſcales.

This remarkable fiſh is repreſented on the plate in its natural ſize. The body is moderately thick, more eſpecially on the fore part: the head is very large; the mouth opening downwards in an almoſt perpendicular direction, but in a curved line; and, when cloſed, the outline of the head or front is completely oval. The eyes are extremely large, and the iris appears to have been of a ſilvery hue, or as in generality of fiſhes. The mouth is deſtitute of teeth, and the tongue, which is moderately large, is adnate, or fixed to the lower jaw, to the extremity of which it almoſt reaches. The *Opercula* or *gill-covers* are furniſhed on the upper part with a large, ſtrong, and rough ſpine, which is very thick at its baſe: a ſmaller and ſhorter ſpine alſo occurs at the lower part:

part: the outline of each operculum is ſomewhat ſinuated by two very ſhort and ſubacute proceſſes towards the middle; and the remainder is compoſed of five or ſix longitudinal rough-edged lamellæ reſembling the ſurface of the body. The *membrana branchioſtega* has about eight rays, of which the four lowermoſt are rough-edged, and thicker than the reſt. Perhaps no fiſh yet known, if we except what are called mailed or cataphracted fiſh, is ſo ſtrongly coated as the preſent; the ſcales forming a kind of proceſſes, which are ſo ſtrongly and cloſely inſerted, that it is not poſſible by means of a forceps to detach one from the reſt, without bringing away with it a ſmall portion of the corium or general integument itſelf; the ſkin in this reſpect reſembling in ſome degree that of the genus *Baliſtes*. Theſe ſcales or proceſſes, as to their general ſtructure, are analogous to thoſe of the Chætodons; terminating outwardly in a fringe of ſmall, ſtrong ſpines, beſides ſeveral ſcattered ones on the ſurface. They differ ſomewhat in ſhape on different parts of the animal, and, as they approach the abdomen, become more dilated. The abdomen itſelf is carinated and cataphracted by a row of eight ſtrong, rough inciſures or ſcales, each of which projects into a ſhortiſh ſpine, pointing backwards, and forming a ſharp keel beneath, while the ſides are continued upwards near a quarter of an inch on each ſide the abdomen. The ſcales of the abdomen, as before obſerved, are alſo ſomewhat broader in this part, and gradually leſſen towards the middle of the body. On each ſide the tail is a ſlightly-prominent line, or an approach to a carinated appearance,

appearance, owing to the middle of each ſcale on that part riſing up a little above the level of the reſt: the ſcales alſo along this part are rather larger than elſewhere: otherwiſe the appearance of a lateral line is ſcarce diſtinct. The *dorſal fin* has fourteen rays, of which the ſeven hindermoſt ſubdivide towards their tips into ſofter ramifications. The *pectoral fins* have thirteen rays: the *ventral fins* ſeven: and the *anal fin* twelve rays, moſt of which ſubdivide into ſofter ramifications at the tip. The *tail* is ſtrongly furcated, and conſiſts of about twenty-four rays, of which the external or ſhorter ones are ſtrong or ſpiny; the reſt of a ſimilar appearance to thoſe of the anal fin. The three firſt rays of all the fins, except the pectoral ones, are very ſtrong, rough, and finely ſerrated outwards, but more particularly thoſe of the ventral fins.

This fiſh, which conſtitutes a new genus, belongs to the Linnæan diviſion of *Thoracici*, or ſuch as have the ventral fins ſituated beneath the pectoral ones. From its uncommonly rough ſurface I have given it the generic name of *Trachichthys*, and as a trivial name, at leaſt till we are better acquainted with its natural hiſtory, it may be ſufficient to diſtinguiſh it by the title of *Auſtralis*. Of all the old Linnæan genera, or thoſe contained in the twelfth edition of the Syſtema Naturæ, it ſeems to approach the neareſt to that of *Perca*. The *Trachichthys Auſtralis* is a native of the coaſts of New Holland, and the ſpecimen from which the preſent engraving was taken occurred amongſt ſeveral other fiſhes preſerved in ſpirits in the collection of Mr. White, chief Surgeon to the

Engliſh

Engliſh ſettlement in thoſe regions. Among ſome drawings in Mr. White's poſſeſſion I have alſo obſerved a repreſentation of this fiſh, which though not executed with minute preciſion as to ſome particulars, ſerves at leaſt to identify the animal, as well as to ſhew the natural color, which is a bright pink-ferruginous or fair reddiſh-brown; whereas in the preſerved ſpecimen the color is faded into a dull brown. The middle part of all the fins is of a deeper color than the reſt of the animal, and the edges are lighter, or of a yellowiſh tinge.

NAIS PROBOSCIDEA.

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Character Genericus.

Corpus repens, longum, lineare, pellucidum, depreſſum.
Pedunculi ſetis ſimplicibus.
Tentacula nulla.
Oculi duo aut nulli.

Lin. Syſt. Nat. Gmel. p. 3120.

Character Specificus, &c.

NAIS ſetis lateralibus ſolitariis, proboſcide longa.

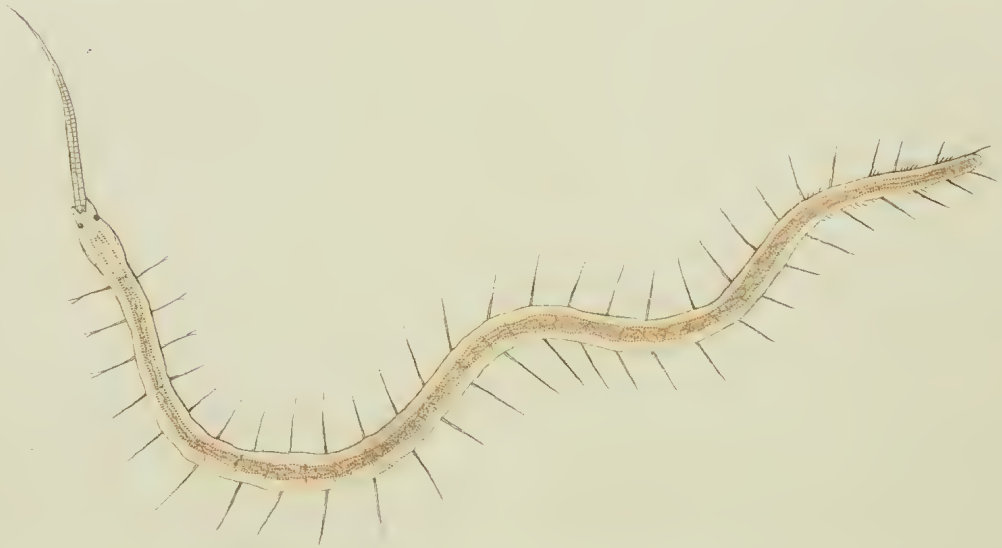
Lin. Syſt. Nat. Gmel. p. 3121.
Müll. verm. hiſt. I. 2. p. 21. *n.* 153.
Zool. dan. prodr. 2649.

NEREIS (lacuſtris) linearis, lingua exſerta.

Lin. Syſt. Nat. p. 1085.

Ternas unciæ partes raro ſuperat longitudine hæc ſpecies, aquarum puriorum ſtagnantium incola, in quibus æſtivo tempore ſæpius poſſit conſpici. Cum motus generalis languide ſit tranquillus, non raro tamen evenit ut corpus ſubito et violenter contorqueatur. Species ipſa facillime a reliquis dignoſcitur,

tur, roſtro ſeu proboſcide prælonga pro corporis magnitudine, et naturaliter exerta. Varia ſpecimina plus minus habent pelluciditatis. Alia omnino vitrea ab ipſa aqua vix poſſunt diſtingui; alia ſubfuſca de longinquo evidenter diſcerni. In eorum animalium numero eſt quæ mira pollent facultate ſe regenerandi, quæque in partes duas vel plures diviſa, paucorum dierum ſpatio totidem perfecta monſtrabunt ſpecimina.



Pub.d by T.P. Nodder Nov.r 1799

ROSTRATED NAIS.

Generic Character.

Body repent, long, linear, pellucid, depreſſed.
Feet conſiſting of ſimple briſtles.
Tentacula none.
Eyes two, or none.

Specific Character, &c.

NAIS with ſingle lateral briſtles, and long proboſcis.

Long-ſnouted NAIS.

The Proboſcis WATER-WORM.

Trembley. hiſt. polyp. t. 6.
Schæff. armpolyp. 1754. *t.* 3.
Roeſ. inſ. 3. p. 483. *t.* 78, *&c.*

This ſpecies, which rarely exceeds the length of about three quarters of an inch, is a native of clear ſtagnant waters, in which it is not uncommon during the ſummer months, and is remarkable for the ſudden and violent contortions into which it frequently throws itſelf, while its more general motion is ſmooth and ſomewhat languid. As a ſpecies it is clearly diſtinguiſhed from others of this genus by the

the length of its proboſcis or tongue, which is naturally exſerted, and of a great length in proportion to the body. In the degree of tranſparency this animal differs greatly in different individuals; being ſometimes ſeen of a glaſſy clearneſs, ſo as ſcarce to be diſtinguiſhable from the water in which it ſwims, and at other times of a duſky caſt, ſo as to be readily perceptible at a diſtance. It is one of thoſe animals which are poſſeſſed, in a very high degree, of the power of reproduction, and if cut into two or more parts, will in a few days conſtitute ſo many complete ſpecimens.

SPONGIA FLABELLIFORMIS.

Character Genericus.

Animal? fixum, flexile, polymorphum, torpidiſſimum, contextum vel e fibris reticulatis, vel e ſpinulis gelatina viva veſtitis;

Oſculis ſeu foraminibus ſuperficiei aquam reſpirantibus.

Soland. et Ellis zooph. p. 182.

Character Specificus, &c.

SPONGIA flabelliformis conformis orbiculata, fibris cartilagineis denſe reticulatis.

Lin. Syſt. Nat. p. 1296.

RETE philippenſe nigrum, telis quadrangulis.

Pet. gaz. t. 32. *f.* 1.

FLABELLUM marinum aruenſe.

Rumph. amb. 6. *t.* 80. *f.* 1.

Elegantis hujus Spongiæ, Gorgoniis aliquibus reticulatis ſimillimæ, differt longe a pleriſque congeneribus generalis aſpectus. Nec aliter formatur et alia ſpecies, quam Linnæus Spongiam *Ventilabrum* nominavit. In maribus Indicis generatur Spongia flabelliformis, interdum major longe ſpecimine quod depinximus.

FAN SPONGE.

GENERIC CHARACTER.

Animal? fixed, flexible, torpid, of various forms; compoſed either of reticulated fibres, or maſſes of ſmall ſpines interwoven together; cloathed with a gelatinous fleſh full of ſmall mouths or foramina on its ſurface, by which it ſucks in and throws out the water.

SPECIFIC CHARACTER, &c.

Fan-ſhaped orbicular cartilaginous SPONGE, with quadrangularly-reticulated fibres.

Blackiſh fan-ſhaped Indian SPONGE.

Cartilaginous Fan-Sponge.

This curious Sponge differs greatly in habit or general form from moſt of its congeners, bearing a ſtrong reſemblance to ſome of the reticulated Gorgoniæ: this is alſo the caſe with another ſpecies of ſponge, viz. the Spongia Ventilabrum of Linnæus. The preſent ſpecies is a native of the Indian ſeas, and is ſometimes found conſiderably larger than the ſpecimen here repreſented.

CERTHIA CHALYBEA.

Character Genericus.

Roſtrum arcuatum, tenue, ſubtrigonum, acutum.
Lingua acuta.
Pedes ambulatorii.

Lin. Syſt. Nat. p. 184.

Character Specificus, &c.

CERTHIA viridi-aurea, alis caudaque fuſcis, faſcia pectorali coccinea lunula cærulea, abdomine albido.

CERTHIA viridis nitens, pectore rubro, faſcia antica chalybea.

Lin. Syſt. Nat. p. 186.

CERTHIA torquata capitis bonæ ſpei.

Briſſ. av. 3. p. 643. *t.* 32. *f.* 1.

In Africa, et præcipue in promontorio bonæ ſpei conſpicitur Certhia chalybea, coloribus interdum varians; collari nempe ſive lunula chalybea plus minus lata in diverſis ſpeciminibus. Tabula illam oſtendit magnitudine naturali.

THE

CHALYBEAN CREEPER.

GENERIC CHARACTER.

Bill ſlender, incurvated, ſharp-pointed.
Tongue differing in the different ſpecies.
Toes three before; one behind: claws hooked and long.

SPECIFIC CHARACTER, &c.

Gold-green CREEPER, with the wings and tail duſky; the breaſt marked by a ſcarlet band and ſteel-blue creſcent; the abdomen whitiſh.

Le SOUI-MANGA à collier.
Buf. ois. 5. p. 502.

GRIMPEREAU du Cap de Bonne Eſperance.
Pl. enl. f. 3.

Collared CREEPER.
Lath. ſyn. p. 709.

The Chalybean Creeper is a native of Africa, and is principally ſeen about the Cape of Good Hope. It ſometimes varies a little in colors; the blue band or creſcent being more or leſs wide in different ſpecimens. The plate repreſents it in its natural ſize.

EPINEPHELUS MERRA.

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Character Genericus.

Caput totum ſquamatum, operculo anteriore ſerrato, poſteriore aculeis armato.

Bloch ichth. x. p. 9.

Character Specificus, &c.

EPINEPHELUS albus, maculis numeroſis ſubhexagonis fuſcis.

EPINEPHELUS corpore toto maculato.

Bloch ichth. 10. p. 15.

PERCA tota maculis fuſcis et punctis albis varia; pinna dorſi aculeorum undecim.

Seb. muſ. 3. p. 76. *tab.* 27. *fig.* 7.

Mare Japonicum incolit Epinephelus Merra, longitudine quaſi pedali. In genere Percæ locum illi proculdubio aſſignaſſet ſyſtema Linnæanum.

Pub.d by Kearsley 1799.

THE

SPOTTED EPINEPHELUS.

Generic Character.

Head entirely covered with ſcales: anterior Gill-Cover ſerrated, poſterior ſpiny.

Specific Character, &c.

White EPINEPHELUS, with numerous ſub-hexagonal brown ſpots.

Le MERRA.

Bloch t. 329.

The ſpotted Epinephelus is a native of the Japoneſe ſea, and is about a foot in length. Linnæus would doubtleſs have placed it the genus Perca.

MADREPORA ROSEA.

Character Genericus.

Animal Meduſa.
Corallium cavitatibus lamelloſo-ſtellatis.
Lin. Syſt. Nat. p. 1272.

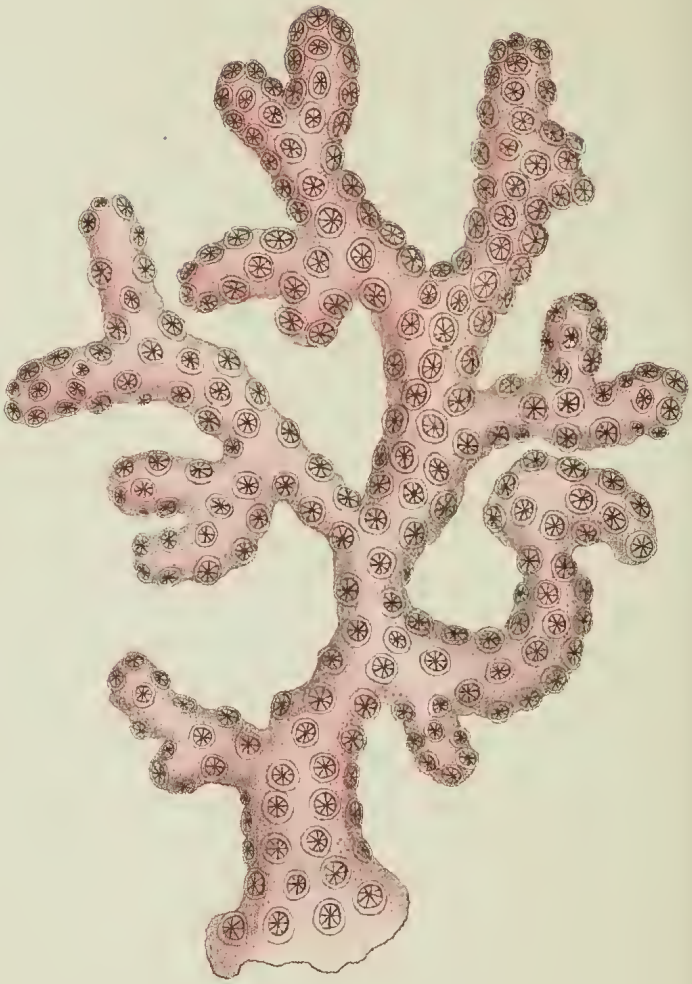
Character Specificus.

MADREPORA ramoſa roſea, ſtellis prominentibus marginatis.

MADREPORA hirtella ? ? ?
Pall. el. zooph. p. 313.

MADREPORA roſea ? ?
Pall. el. zooph. p. 312.

In pulcherrimis Madreporarum ramoſarum habenda eſt hæc ſpecies, cui recens e mari extractæ color læte roſeus, poſtea fit pallidior et evanidus. In oceano Indico innaſcitur, eadem magnitudine quam cernere eſt in tabula.



Pub.d by J.P.Nodder May 1799

ROSE MADREPORE.

Generic Character.

Animal allied to a Meduſa.
Coral marked with lamellar ſtar-ſhaped impreſſions or cavities.

Specific Character.

Branching roſe-coloured MADREPORE, with prominent marginated ſtars.

This is one of the moſt elegant of the ramified Madrepores, being, when recent, of a beautiful roſe-color, which fades to a paler tinge afterwards. It is a native of the Indian ocean, and is repreſented on the plate in its natural ſize.

SCARABÆUS MACROPUS.

Character Genericus.

Antennæ clavatæ capitulo fiſſili.
Tibiæ anticæ ſæpius dentatæ.

Lin. Syſt. Nat. p. 541.

Character Specificus.

SCARABÆUS ſcutellatus viridis nitens, ſubtus cupreo-auratus, pectore porrecto, femoribus poſticis craſſiſſimis.

Francill. deſcr. ſcarab. rar.

In formandis ſcarabæis variam et quaſi ludibundam eſſe naturam dudum obſervavimus; in ſcarabæis præcipue majoribus, qui, ut plurimum, nigri aut fuſci, privantur ſplendidis coloribus, quibus ſuperbiunt multa ex inſectis coleopteris minoribus. A congeneribus tamen inſigniter differt ſpecies de qua jam loquimur; cum formæ inconcinnæ, quæque carere videtur apto partium conſenſu, adjecti ſunt colores vividi et pulcherrimi. Totus ſcarabæus ſuperior ſplendide gramineo-viret quaſi vernice oblitus; inferior nitet more cupri politiſſimi; crura poſtica præcipue, adeo enormiter magna, ſi cum corpore comparantur, ut primo viſu impedimento ei et incommodo eſſe videantur. Dictus inde eſt

ſcarabæus

ſcarabæus macropus. Ad ſaltum tamen, ſi forte ſaliendo graditur, apta omnino et accommodata eſt hæc inſolita crurum longitudo.

Mirum hoc inſectum a Potoſi delatum in pinacotheca exſtat Domini Francillon, qui iconem ad hoc opus ornandum humaniſſime nobiſcum communicavit, eodem corporis ſitu inſectum monſtrantem quo illa quæ ab ipſo Domino Francillon non ita pridem publicata eſt.

Pub.d by F.P. Nadder May 99,

THE

KANGUROO BEETLE.

Generic Character.

Antennæ divided at the tip or head into ſeveral lamellæ.

Tibiæ or ſecond joints of the fore-legs generally toothed.

Specific Character.

Scutellated bright-green BEETLE, gold-coppery beneath; with projecting breaſt; the thighs of the hind-legs very thick.

Francill. deſcr. of a rare Scarabæus.

It has been already obſerved in the preſent work that in the genus Scarabæus Nature ſeems to have exerted an almoſt capricious diverſity of form; the moſt extravagant ſhapes that can eaſily be conceived preſenting themſelves to our view amongſt the larger animals of this tribe. It is alſo to be obſerved that, in general, the color of the larger beetles is either black or brown, and ſeldom exhibits that rich aſſortment of brilliant hues ſo conſpicuous in many of the ſmaller coleopterous inſects. A ſtriking exception however to this rule occurs in the inſect repreſented

in

in its natural ſize on the preſent plate, and which to a form the moſt ſeemingly diſproportioned unites the moſt beautiful colors; the whole animal, on the upper ſurface, being of the richeſt varniſhy graſs-green, while the under ſurface is ornamented by a metallic luſtre reſembling that of burniſhed copper: this is particularly conſpicuous on the hind legs, which are of ſo enormous a ſize in proportion to the reſt of the animal as to appear, at firſt view, rather an inconvenience to it. The animal may however be formed for leaping; for which purpoſe this extravagant ſize of leg may be well calculated. It is from this circumſtance that it has received the title of the Kanguroo Beetle.

This ſingular Beetle was received from Potoſi, and is preſerved in the elegant collection of Mr. Francillon, who politely permitted a figure to be engraved for the preſent publication, and which ſhews the inſect in the ſame poſture with the beautiful repreſentation ſome time ago publiſhed by that gentleman.

PLATYPUS ANATINUS.

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Character Genericus.

Os anatinum.
Pedes palmati.

Novum ominino et inauditum conſtituit genus quod in tabula depingitur animal, juxta Linnæanam diviſionem in *Brutorum* ordine reponendum, et Myrmecophagis proxime annumerandum. Diverſum omnino ab omnibus *Mammalibus* quæ hactenus phyſicis innotuerint, perfectam roſtri anatini ſimilitudinem capiti quadrupedis adjunctam ſortitum eſt. Rei novitate perculſi non niſi inſpectione ſemel atque iterum attentiſſime habita perſuadere nobiſmetipſis potuimus verum et genuinum eſſe quadrupedis roſtrum; primo ſuſpicantes artem luſoriam cum ipſa Natura feliciſſime certaſſe: eandem enim habet epidermidem, ſerraturas, aperturam, totam denique roſtri conformationem anas quæ *clypeata* dicitur Linnæi, ſeu alia aliqua anas latiroſtra.

Corpus depreſſum, lutræ corpori quodammodo ſimile niſi quod multo minus ſit, pilo denſiſſime obſitum molli et quaſi caſtoreo, ſaturatim infuſcatur, infra ſub-ferrugineo-albet. Caput modice parvum, fere complanatum, roſtro (ut ſupra diximus) anatis cujuſdam latiroſtræ ſimillimo; ducta orbiculatim circa baſin membrana, cujus pars ſuperior æquat

latitudine circiter octavam unciæ partem, inferior circa quintam. Cauda depreſſa, nec minus corpore piloſa, breviuſcula et obtuſa, latior ad baſin, indeque ſenſim decreſcens in apicem fere ſubbifidum, tres quaſi uncias longa, corpori concolor. Longum eſt totum animal a roſtri apice ad extremum caudæ tredecim uncias: roſtrum unciam cum dimidio. Crura breviſſima in pedes late pinnatos deſinunt, pinnis anticorum longe ultra ungues excurrentibus; poſticorum tantum ad baſes unguium pertingentibus. Ungues digitis anticis ſunt quinque, recti, validi, acuti, duobus exterioribus paulo brevioribus. Poſticis ſex, longiores, magiſque curvati; digito et ungue exteriore quatuor mediis multo breviore; ungue interiore ſeu ſexto altius cruri adjuncto, ad inſtar validi et acuti calcaris. Crura omnia ſuperne piloſa ſunt. Pedes anteriores ſupra infraque nudi: poſteriores ſupra piloſi, ſubtus nudi. Mandibulæ inferioris, quæ anguſtior eſt ſuperiore, margines interiores ſtriis ſeu ſerraturis plurimis notantur, eodem modo quo roſtrum anatis. Nares parvulæ, rotundæ, diſtant quaſi quadrantem unciæ ab extremo roſtro, et octavam unciæ partem a ſe invicem. Dentium nulla ſunt veſtigia. Caret ſpecimen palato, quod ex ore diſcerptum eſt; ſed quatenus a ſitu conjicere liceat, probabile eſt ſimile fuiſſe palato anatis. Defuit quoque lingua ſpecimini. Aurium ſpatio fere ſemiunciali ab oculis remotarum foramen ovatum, octavam unciæ partem latum, pilo occultatur; nulla extrinſecus viſibili aure. Oculi ſub duabus albis maculis ſiti ſunt non longe a baſi roſtri. Vivo animali veriſimile eſt eos perexiguos fuiſſe, fortaſſe

fortaſſe etiam ſubcuticulares; cavitates enim profunde latent ſub vellere haud majoris diametri decima unciæ parte; unde conjicimus non indulſiſſe iis Naturam viſum clarum et diſtantia proſpectantem, ſed illum tantummodo qui talpis et aliis nonnullis ejuſmodi quadrupedibus conceditur.

A roſtro et pedibus pinnatis non dubitamus Platypum locorum fluvialium eſſe incolam, in ripis cubile ſibi poſſe effodere, veſcique plantis et animalibus aquaticis.

De animali à cæteris adeo inſigniter diſcrepante ut clariſſimi Buffoni dictum comprobet, "quicquid poſſibile ſit generari Naturam revera generaſſe," nihil in præſens habemus quod ulterius proferamus. Plenius innoteſcet phyſicis (uti ſperare fas eſt) accurate examinatum in locis natalibus.

Non modo excuſatos habemus verum etiam laudatos lectores noſtros, ſi de re infolita et pene incredibili paululum addubitaverint: et fatemur noſmetipſos oculis noſtris vix ac ne vix credidiſſe. Audacter tamen poſſumus aſſerere nos nulla fallaciarum ſigna detegiſſe, mandibularumque margines, rictum, omniaque ad roſtrum pertinentia, poſtquam ipſius macerationis periculum in aqua ſubierant, ut facilius moveri poſſent, fuiſſe omnino naturalia, nec peritiſſimorum anatomicorum acumini vel minimum fraudis veſtigium pateſcere.

In Auſtralaſia generatur Platypus anatinus.

Ipſiſſimum animal penes eſt Dominum Dobſonum, qui arte anatomica quam in ſpecimina vegetabilia pereleganter exercet merito inclaruit.

Publ.d by J.F.K. Adler June 1799.

THE

DUCK-BILLED PLATYPUS.

GENERIC CHARACTER.

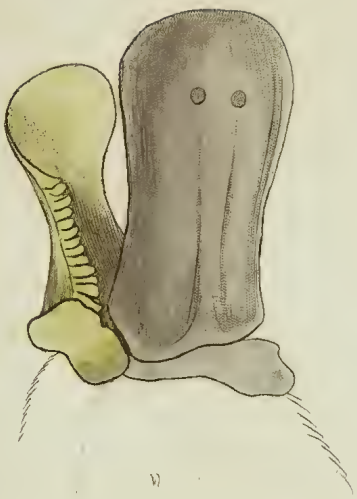
Mouth ſhaped like the bill of a Duck.
Feet webbed.

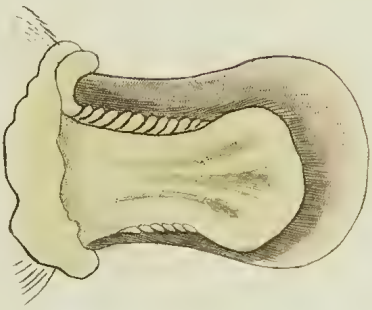
The animal exhibited on the preſent plate conſtitutes a new and ſingular genus, which, in the Linnæan arrangement of Quadrupeds, ſhould be placed in the order *Bruta*, and ſhould ſtand next to the genus Myrmecophaga.

Of all the Mammalia yet known it ſeems the moſt extraordinary in its conformation; exhibiting the perfect reſemblance of the beak of a Duck engrafted on the head of a quadruped. So accurate is the ſimilitude that, at firſt view, it naturally excites the idea of ſome deceptive preparation by artificial means: the very epidermis, proportion, ſerratures, manner of opening, and other particulars of the beak of a ſhoveler, or other broad-billed ſpecies of duck, preſenting themſelves to the view: nor is it without the moſt minute and rigid examination that we can perſuade ourſelves of its being the real beak or ſnout of a quadruped.

The body is depreſſed, and has ſome reſemblance to that of an Otter in miniature: it is covered with a very

a very thick, ſoft, and beaver-like fur, and is of a moderately dark brown above, and of a ſubferruginous white beneath. The head is flattiſh, and rather ſmall than large: the mouth or ſnout, as before obſerved, ſo exactly reſembles that of ſome broad-billed ſpecies of duck that it might be miſtaken for ſuch: round the baſe is a flat, circular membrane, ſomewhat deeper or wider below than above; viz. below near the fifth of an inch, and above about an eighth. The tail is flat, furry like the body, rather ſhort, and obtuſe, with an almoſt biſid termination: it is broader at the baſe, and gradually leſſens to the tip, and is about three inches in length: its color is ſimilar to that of the body. The length of the whole animal from the tip of the beak to that of the tail is thirteen inches: of the beak an inch and half. The legs are very ſhort, terminating in a broad web, which on the fore-feet extends to a conſiderable diſtance beyond the claws; but on the hind-feet reaches no farther than the roots of the claws. On the fore-feet are five claws, ſtrait, ſtrong, and ſharp-pointed: the two exterior ones ſomewhat ſhorter than the three middle ones. On the hind feet are ſix claws, longer and more inclining to a curved form than thoſe of the fore-feet: the exterior toe and claw are conſiderably ſhorter than the four middle ones: the interior or ſixth is ſeated much higher up than the reſt, and reſembles a ſtrong, ſharp ſpur. All the legs are hairy above: the fore-feet are naked both above and below; but the hind-feet are hairy above, and naked below. The internal edges of the under mandible, (which is narrower than the upper) are ſerrated





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ſerrated or channelled with numerous ſtriæ, as in a duck's bill. The noſtrils are ſmall and round, and are ſituated about a quarter of an inch from the tip of the bill, and are about the eighth of an inch diſtant from each other. There is no appearance of teeth: the palate is removed, but ſeems to have reſembled that of a duck: the tongue alſo is wanting in the ſpecimen. The ears or auditory foramina are placed about half an inch beyond the eyes: they appear like a pair of oval holes of the eighth of an inch in diameter; there being no external ear. On the upper part of the head, on each ſide, a little beyond the beak, are ſituated two ſmalliſh, oval, white ſpots; in the lower part of each of which are imbedded the eyes, or at leaſt the parts allotted to the animal for ſome kind of viſion; for from the thickneſs of the fur and the ſmallneſs of the organs they ſeem to have been but obſcurely calculated for diſtinct viſion, and are probably like thoſe of Moles, and ſome other animals of that tribe; or perhaps even ſubcutaneous; the whole apparent diameter of the cavity in which they were placed not exceeding the tenth of an inch.

When we conſider the general form of this animal, and particularly its bill and webbed feet, we ſhall readily perceive that it muſt be a reſident in watery ſituations; that it has the habits of digging or burrowing in the banks of rivers, or under ground; and that its food conſiſts of aquatic plants and animals. This is all that can at preſent be reaſonably gueſſed at: future obſervations, made in its native regions, will, it is hoped, afford us more ample

ample information, and will make us fully acquainted with the natural hiſtory of an animal which differs ſo widely from all other quadrupeds, and which verifies in a moſt ſtriking manner the obſervation of Buffon; viz. that whatever was poſſible for Nature to produce has actually been produced.

On a ſubject ſo extraordinary as the preſent, a degree of ſcepticiſm is not only pardonable, but laudable; and I ought perhaps to acknowledge that I almoſt doubt the teſtimony of my own eyes with reſpect to the ſtructure of this animal's beak; yet muſt confeſs that I can perceive no appearance of any deceptive preparation; and the edges of the rictus, the inſertion, &c. when tried by the teſt of maceration in water, ſo as to render every part completely moveable ſeem perfectly natural; nor can the moſt accurate examination of expert anatomiſts diſcover any deception in this particular.

The Platypus is a native of Auſtralaſia or New Holland, and is at preſent in the poſſeſſion of Mr. Dobſon, ſo much diſtinguiſhed by his exquiſite manner of preparing ſpecimens of vegetable anatomy.

HIPPOBOSCA HIRUNDINIS.

Character Genericus.

Os hauſtello brevi, cylindrico, recto, bivalvi; valvulis æqualibus.

Antennæ filiformes.

Pedes unguibus pluribus.

Lin. Syſt. Nat. Gmel. p. 2904.

Character Specificus, &c.

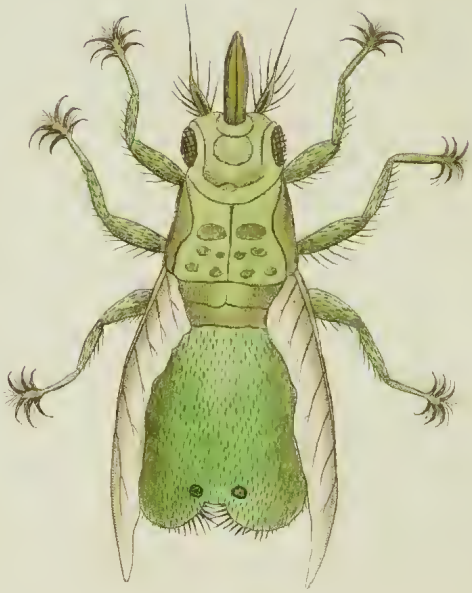
HIPPOBOSCA alis ſubulatis, pedibus hexadactylis.

Lin. Syſt. Nat. p. 1010.

Reaum. inſ. 4. *t.* 11. *fig.* 1—5.
Schaeff. ic. inſ. t. 53. *f.* 1. 2.
Geoff. inſ. par. 2. p. 547. *n.* 2.
Scop. ent. carn. 1023.

Genus Hippoboſca a cæteris omnibus inſectis quæ *diptera* vocantur, inſigniter differt, et vinculo quodam connectere videtur inſecta *diptera* et *aptera*; eſt enim ſpecies, Hippoboſca ſcilicet ovina, quæ alis omnino caret. Generantur præterea Hippoboſcæ eodem fere modo quo pleraque aptera. Ex ovo enim permagno, (quod non tam merum ovum quam pupam

pam esse seu chrysalidem notavit Linnæus) erumpere solet insectum plene formatum. In nidis hirundinis *urbicæ* et *rusticæ* Linnæi non modica plerumque est copia hippobosсæ hirundinis ; nec raro in ipsis avibus, præsertim in iis quæ non plene adoleverint ; quibus non parvam necesse est creent molestiam, non solum magnitudine, sed pedibus ad libitum tenaciter infixis, non duplici tantum ungue, (ut fit in aliis plerisque insectis) sed sex æquali fere longitudine instructis. Motus ei celer est et inæqualis ; sæpe etiam retrogradus. Ostenditur in tabula tum vera tum aucta magnitudine.



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THE

SWALLOW HIPPOBOSCA.

GENERIC CHARACTER.

Mouth conſiſting of a ſhort, ſtrait, cylindric, bivalve ſucker or tube, with equal valves.
Antennæ filiform.
Feet furniſhed with ſeveral claws.

SPECIFIC CHARACTER, &c.

HIPPOBOSCA with ſharp wings and ſix-clawed feet.

The ſharp-winged HIPPOBOSCA.

The SWALLOW-FLY.

The genus Hippoboſca differs remarkably from all other inſects of the dipterous tribe, and ſeems to form as it were a ſhade or connecting link between the orders Diptera and Aptera; one ſpecies, the H. ovina, (commonly termed the ſheep-tick) being entirely deſtitute of wings. The Hippoboſcæ alſo reſemble moſt of the apterous inſects in their mode of production; the ovum, (which is of uncommon ſize) encloſing the inſect completely formed; ſo that, as Linnæus obſerves, it ſeems rather a purpa

or

or ready-formed chryſalis than an ovum. The Hippoboſca hirundinis may be generally found in conſiderable plenty in the neſts of Martins and Swallows, and not unfrequently on the birds themſelves, eſpecially thoſe which have lately left the neſt, or have not attained their full growth. The ſize of the inſect muſt of neceſſity render it extremely troubleſome to the birds thus infeſted, to which it is enabled at pleaſure to adhere by means of the peculiar conformation of the feet, each of which, in this genus, inſtead of being furniſhed with two claws only, as in the generality of inſects, is provided with ſix of nearly equal ſize. The motions of this inſect are quick and irregular, and it frequently moves laterally, and even backwards with great facility. The plate repreſents it both in its natural ſize, and as it appears when magnified.

PAPILIO IO.

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Character Genericus.

Antennæ apicem verſus craſſiores, ſæpius clavato-capitatæ.

Alæ (ſedentis) erectæ ſurſumque conniventes, (volatu diurno.)

Lin. Syſt. Nat. p. 744.

Character Specificus, &c.

PAPILIO alis angulato-dentatis fulvis nigro-maculatis; ſingulis ocello cæruleo.

Lin. Syſt. Nat. Gmel. p. 2290.

Nymph. gemmat.

OCULUS pavonis.

Goed. inſ. t. 1.

Merian inſ. Eur. 1. *t.* 26.

Roeſ. inſ. 1. *t.* 3.

Urticas depaſcitur larva pulcherrimi hujus papilionis; indeque extrema cauda dependens, ut cernere eſt in tabula, in chryſalidem convertitur menſe Julio; e qua erumpit papilio incipiente Auguſto.

NATIONAL MUSEUM OF VICTORIA

RV.

Pub.d by S.P. Nodder June 7.09.

THE

PEACOCK BUTTERFLY.

Generic Character.

Antennæ commonly thickening towards the end into a clavated tip.

Wings (when at reſt) meeting upwards. (Flight diurnal.)

Specific Character, &c.

Orange-brown BUTTERFLY, with angular, dentated wings, ſpotted with black; with a large blue-ſhaded eye on each wing.

Alb. inſ. pl. 3.
Reaum. inſ. 1. *t.* 25. *fig.* 1. 2.
Wilk. pap. 55. *pl.* 3. A. 2.
Harr. aurel. pl. 8. *f. k. i.*

The caterpillar or larva of this moſt beautiful butterfly feeds on nettles, and commonly changes into a chryſalis in July; hanging by the tail, as expreſſed in the plate. The Fly appears in the beginning of Auguſt.

FALCO PONTICERIANUS.

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Character Genericus.

Roſtrum aduncum, baſi cera inſtructum.
Caput pennis arcte tectum.
Lingua bifida.

Lin. Syſt. Nat. p. 124.

Character Specificus, &c.

FALCO caſtaneus, capite collo pectoreque albis, cera cærulea, pedibus flavis.

FALCO PONTICERIANUS.

Lath. ind. orn. p. 23.
Lin. Syſt. Nat. Gmel. p. 265.

AQUILA PONTICERIANA.

Briſſ. orn. 2. p. 129.

Milvo vulgari fere æqualis eſt magnitudine ſpecies hæc pulcherrima, quam in variis Indiæ Orientalis partibus generatam quaſi ſacram veneratur incolarum ſuperſtitio. Variare paululum videtur plumarum color; cum in opere cui titulus *Planches Enluminees*, depingantur pectus et abdomen ſtriis parvulis fuſcis in longitudinem ductis notata, quarum in ſpecimine quod continet Muſeum Britannicum, unde delineata eſt noſtra figura, ne minima ſunt veſtigia.

THE

PONDICHERRY EAGLE.

Generic Character.

Bill hooked; with a cere or naked ſkin at the baſe.
Head thickly beſet with feathers.
Tongue generally bifid.

Specific Character, &c.

Cheſnut-coloured Eagle, with white head neck and breaſt, blue cere, and yellow feet.

PONDICHERRY EAGLE.

Lath. syn. 1. p. 41.

AIGLE DE PONDICHERRY.

Buf. ois. 1. p. 136.
Pl. enl. 416.

This elegant ſpecies is nearly equal in ſize to a kite. It is a native of many parts of the Eaſt Indies, and is conſidered as a ſacred bird. It appears to vary a little in point of plumage; the figure given in the *Planches Enluminees* repreſenting it as daſhed down the breaſt and abdomen with ſmall longitudinal ſtreaks of brown; of which, in the ſpecimen preſerved in the Britiſh Muſeum, from which the preſent figure was drawn, there is not the ſlighteſt appearance.

MONOCULUS CONCHACEUS.

Character Genericus.

Pedes natatorii.
Corpus cruſta tectum.
Oculi (pleriſque) approximati, teſtæ innati.

Character Specificus, &c.

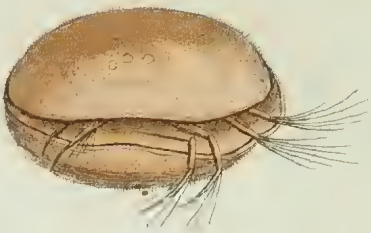
MONOCULUS teſta ovali tomentoſa.
Lin. Syſt. Nat. Gmel. p. 3003.

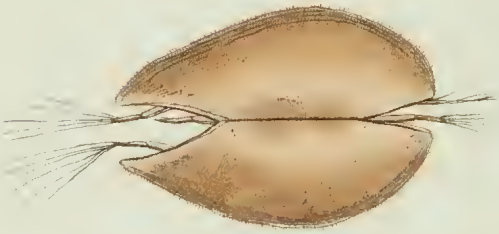
M. antennis capillaribus multiplicibus, teſta bivalvi.
Lyn. Syſt. Nat. ed. 12. p. 1059.

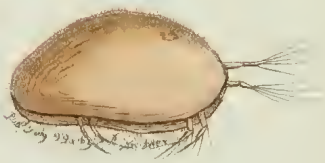
M. ovato-conchaceus.
Degeer. ins. 7. p. 476. t. 29. f. 5—7.

Cypris pubera.
Müll. entomoſt. p. 56. n. 15. t. 5. f. 1—5.

In omnibus fere aquis ſtagnantibus conſpici poſſit æſtivo tempore Monoculus conchaceus, mytulo deminuto ſimillimus. Variat moles pro ætate; interdum grano arenæ vix major, interdum decimæ fere unciæ parti æqualis. Color, ut plurimum, leviter fuſcus, interdum ſubflavo tinctus.







THE

MUSCLE MONOCULUS.

Generic Character.

Feet formed for ſwimming.
Body covered by a cruſtaceous ſhell.
Eyes (in moſt ſpecies) approximated, fixed in the ſhell.

Specific Character, &c.

Brown oval MONOCULUS, with downy ſhell.
Oval-ſhelled MONOCULUS.
Muſcle MONOCULUS.

The Monoculus Conchaceus, ſo remarkable for its reſemblance to a muſcle in miniature, may be diſcovered in almoſt every ſtagnant water during the ſummer months. In ſize it varies according to age; being ſometimes ſcarce larger than a grain of ſand, and ſometimes nearly the tenth of an inch in length. Its color is a pale brown, with a ſlight caſt of yellow.

FLUSTRA FOLIACEA.

Character Genericus.

Animal Hydra.
Stirps membranacea, foliacea, celluloſa.

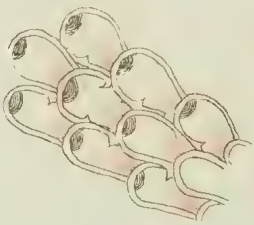
Character Specificus, &c.

FLUSTRA FOLIACEA ramoſa, laciniis cuneiformibus rotundatis.
Lin. Syſt. Nat. p. 1300.

Alga marina πλατυκερως poroſa.
J. Bauh. hiſt. plant. 3. p. 809.

Fucus marinus, &c. telam ſericeam textura ſua æmulans.
Moris. hiſt. pl. 3. p. 646. ſect. 15. t. 8. f. 16.

Fluſtram depinximus, quæ adeo accedit ad plantæ ſimilitudinem, ut intuentium oculos facillime poſſit decipere. Frequens ſatis eſt in litoribus Britannicis, adhæretque conchis, rupibus, et aliis multis quæ in mari generantur. Veram magnitudinem oſtendit tabula. Mollis ei eſt ſubſtantia, colore fuſco-pallidiſſimo-flaveſcente.



Publ.d Jan.

FOLIACEOUS FLUSTRA.

Generic Character.

Animal Polype-ſhaped.
Stem foliaceous, membranaceous, cellular.

Specific Character, &c.

FOLIACEOUS branchy Fluſtra, with rounded ſubdiviſions.

Broad-leaved Horn-wrack.

Ell. corall. p. 70.

FOLIACEOUS FLUSTRA, or Leafy Horn-wrack.

The ſpecies of Fluſtra here repreſented is of an appearance ſo perfectly reſembling that of a vegetable, that it is impoſſible, at firſt view, not to ſuppoſe it a real plant. It is not uncommon on the Britiſh coaſts, and is found attached to ſhells, rocks, and various ſubmarine ſubſtances. Its ſize is as repreſented in the plate. It is of a ſoft ſubſtance, and its color is an extremely pale yellowiſh brown.

TUBULARIA INDIVISA.

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Character Genericus.

Stirps tubulosa, simplex vel ramosa, basi affixa. *Animal* capite tentaculis cristato.

Character Specificus, &c.

TUBULARIA culmis simplicissimis, geniculis contortis.

Lin. Syst. Nat. p. 1301.

Corallina TUBULARIA calamos avenaceos referens.

Ell. corall. p. 31. t. 16. f. c.

Adiantum aureum marinum.

Lhwyd. act. angl. 28. p. 275. t. 6. f. 7.

Marina hæc species, tubulariarum Britannicarum maxima, cujus veram magnitudinem ostendit tabula, in variis litoribus nostratibus testis aliisque ejusmodi adhæret. Corpora animalium rubro-pallida: capita phœnicea, tentaculis exterioribus seu majoribus albis, tubis seu receptaculis melinis.

UNDIVIDED TUBULARIA.

Generic Character.

Stem tubular, ſimple or branched, fixed by the baſe.

Animal creſted with tentacula.

Specific Character, &c.

TUBULARIA with ſimple or undivided ſtems and twiſted joints.

TUBULAR Coralline like oaten pipes.

Ell. corall. p. 31.

Oat-ſtraw TUBULARIA, or Tubular Coralline.

This is the largeſt of the Britiſh Tubulariæ, and is repreſented on the plate in its natural ſize. It is a marine ſpecies, and is found on ſeveral of our coaſts, adhering to rocks, ſhells, &c. The bodies of the animals are of a pale red, the heads of a bright crimſon, the larger or exterior tentacula white, and the tubes or receptacles of a ſtraw color.

PLATYPUS.

Quum de Platypo non ita pridem in hoc opere depicto tractaremus, " non modo excusatos habuimus verum etiam laudatos lectores nostros, si de re insolita et pene incredibili paululum addubitaverint; et fassi sumus nosmet-ipsos oculis nostris vix ac ne vix credidisse." Qui igitur litem dirimendi pari nobiscum flagrant studio, perlegant quæ annotaverint Pallas, Guldenstedtius, et Lepechinius de Sorice moschato Linnæi, qui aliqua ex parte ad Platypi similitudinem evidenter videtur accedere, quique, licet in nonnullis Europæ regionibus non admodum rarus sit, jejune tamen depictus est, nec (nisi ab auctoribus quos jam memoravimus) satis luculente descriptus. Fatendum quidem est Soricis moschati pedes posteriores multo latius esse pinnatos quam anteriores, quod Platypo contrarium obtigit. Cauda quoque insigniter differt. Certum tamen est Soricem moschatum lepido fallaciarum experimento egregie posse inservire. Decernet in posterum de miro animali diligens et accurata investigatio, quod in præsens dubium sit et controversum necesse est.

PLATYPUS.

In the deſcription of the animal called Platypus, in a preceding number of this publication, I obſerved that "a degree of ſcepticiſm on a ſubject ſo extraordinary was not only pardonable but laudable, and that I almoſt doubted the teſtimony of my own eyes with reſpect to the ſtructure of that animal's beak." I therefore recommend to the attention of thoſe who may be equally zealous in the inveſtigation of a point ſo intereſting, the deſcriptions given by Pallas, Guldenſtedt, and Lepechin of an animal, not indeed very rare in ſome parts of Europe, but which ſeems to have been hitherto but indifferently figured, and, till lately, but very imperfectly deſcribed, viz. the Sorex moſchatus Lin. In this animal, in ſome particulars, an evident approach ſeems to be made to the Platypus; and though the ſtructure of the feet differs as to exact ſimilitude, there is yet a general reſemblance; except that the authors above mentioned repreſent the hind feet as much more widely webbed than the fore; the contrary of which is the caſe in the Platypus: the tail is alſo of a widely different appearance. It is undeniable however that no animal would ſo well anſwer for an experiment of ingenious deception as the Sorex moſchatus. Upon the whole this paradoxical quadruped muſt be left to future inveſtigation, and we muſt be content at preſent to remain ignorant of its real nature.

BUCCO BIDENTATUS.

Character Genericus.

Roſtrum cultratum, lateraliter compreſſum, apice utrinque emarginato, incurvato; rictu infra oculos protenſo.

Nares pennis recumbentibus obtectæ.

Pedes ſcanſorii.

Lin. Syſt. Nat. p. 168.

Character Specificus, &c.

BUCCO mandibula ſuperiore bidentata.

BUCCO dubius.

Lath. ind. orn. p. 206.

Lin. Syſt. Nat. Gmel. p. 409.

Magnitudine naturali tertia fere parte minor depingitur in tabula rariſſima avis, Barbariæ incola; quæ licet habitu et forma generali *Ramphaſtis* admodum ſit affinis, linguam tamen habet non in pennæ ſimilitudinem formatam (qualem habent Ramphaſti) ſed craſſam ſeu carnoſam. In Muſeo Britannico continetur pulchrum ſpecimen, unde delineata eſt hæc noſtra figura.

THE

TOOTH-BILLED BARBET.

Generic Character.

Bill wedge-ſhaped, laterally compreſſed, incurvated at the tip and emarginated on each ſide; the rictus or gape extending beyond the eyes.
Noſtrils covered with recumbent feathers.
Feet ſcanſorial.

Specific Character, &c.

BARBET with the upper mandible bidentated.
Doubtful BARBET.

Lath. Syn. ſuppl. p. 96.

Barbican.

Buf. ois. 7. p. 132.
Pl. enl. 602.

This very rare ſpecies is a native of Barbary, and is repreſented about a third part leſs than its natural ſize. In general appearance it is extremely allied to the Toucans. The tongue however is not feather-ſhaped as in thoſe birds, but thick or fleſhy. The beautiful ſpecimen here figured is in the Britiſh Muſeum.

PHALANGIUM RENIFORME.

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Character Genericus.

Pedes octo.
Oculi verticis duo contigui, duo laterales.
Frons antennis pediformibus.
Abdomen rotundatum.

Lin. Syſt. Nat. p. 1028.

Character Specificus, &c.

PHALANGIUM brachiis dentatis, pedibus primis longiſſimis filiformibus, thorace reniformi.

Lin. Syſt. Nat. p. 1029.

Tarantula fuſca major.

Brown. jam. 409. t. 11. f. 3.

Cancellus araneoides.

Petiv. pteriog. t. 20. f. 12.

Generis Phalangii, araneis admodum affinis, ſi non pulchritudinem, formam tamen ſingularem et inſolitam datur mirari. Species, cujus vera magnitudo in tabula oſtenditur, Americæ partes calidiores incolit, morſu dicta non modo ſummum dolorem, ſed interdum etiam gravia abſorpti veneni ſymptomata excitare.

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THE

RENIFORM PHALANGIUM.

Generic Character.

Eight *Legs.*
Two vertical and two lateral *Eyes.*
Antennæ reſembling legs.
Abdomen rounded.

Specific Character, &c.

PHALANGIUM with the arms dentated; the firſt pair of legs extremely long and filiform; the thorax kidney-ſhaped.
Great Brown PHALANGIUM.

The genus Phalangium, nearly allied to that of Aranea, is much more remarkable for the ſingularity than the beauty of its appearance. The preſent ſpecies, which the plate repreſents in its natural ſize, is a native of the hotter regions of America, and is ſaid to be of a dangerous nature; the bite exciting not only ſevere pain, but, in ſome inſtances, producing the moſt alarming ſymptoms of poiſon.

BRACHIONUS URCEOLARIS.

Character Genericus.

Corpus contractile, testa tectum, ciliis rotatoriis.
Lin. Syst. Nat. Gmel. p. 3872.

Character Specificus, &c.

BRACHIONUS testa apice multidentata, basi mutica, cauda simplici.
Lin. Syst. Nat. Gmel. p. 3872.

BRACHIONUS capsularis, testa ovata, apice sexdentata, basi incisa, cauda longa bicuspi.
Müll. anim. inf. p. 356. t. 50. f. 15—21.

Vorticella urceolaris.
Lin. Syst. Nat. ed. 12. p. 1319.

In stagnis Britannicis æstivo tempore non raro conspectus Brachionus urceolaris, affinis admodum est Brachiono Bakeriano Mülleri, qui in præcellenti opere de animalculis infusoriis ambas species depingi curavit. Ob abundantiam Brachionorum interdum quasi pellicula induuntur aquæ obscure rubente seu ferruginea. Superat magnitudine hæc species plerosque congeneres; in guttula puræ aquæ impositа nudo oculo visibilis. Manifesti sunt ovorum racemi

sub

ſub tempus generationis. Animalculum primus dilucide deſcripſiſſe videtur ingenioſus Henricus Bakerus, qui in opere cui titulus "Employment for the Microſcope," iconem exculpi curavit, fidam ſatis, parum tamen elegantem. Color generalis fuſco-rufeſcit.

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THE

BELL-SHAPED BRACHIONUS.

Generic Character.

Body contractile, encloſed in a ſhell, and furniſhed at the head with rotatory organs.

Specific Character, &c.

BELL-SHAPED BRACHIONUS, with the ſhell divided into ſeveral teeth at the top; rounded at bottom; the tail long and bifid at the tip.

The Bell BRACHIONUS.

Tooth-ſhelled BRACHIONUS.

This ſpecies, which is by no means uncommon in the ſtagnant waters of England during the ſummer months, is extremely nearly allied to the Brachionus Bakeri of Müller, who in his admirable work on the animalcula infuſoria has given figures of both. The Brachioni are ſometimes ſo numerous as to form on the ſurface of the water a ſcum of a deep duſky red or ferruginous color. The ſize of the B. urceolaris exceeds that of many others of this genus; being ſuch as to render it viſible to the naked eye, when placed in a drop of clear water. The ovaries

or

or clusters of spawn in the breeding season are extremely conspicuous. This animalcule seems to have been first distinctly described by the ingenious Mr. Henry Baker, who in his work entitled *Employment for the Microscope* has given a figure sufficiently exact to determine the species, though not remarkable for its elegance. Its general color is a reddish brown.

CONUS AULICUS.

Character Genericus.

Animal Limax.
Teſta univalvis, convoluta, turbinata.
Apertura effuſa, longitudinalis, linearis, edentula, baſi integra.
Columella lævis.

Character Specificus, &c.

CONUS teſta venis reticulatis faſciiſque longitudinalibus fuſcis interruptis.
Lin. Syſt. Nat. p. 1171.
Seb. Mus. t. 47. fig. 10—12.
Knorr. vergn. 2. t. 1. f. 1—3. et. 3. t. 19. f. 1.
Regenf. conch. 1. t. 8. f. 25.
Born. mus. Caes. Vind. teſt. t. 7. f. 14.

In mari Indico præcipue reperta ſedem ſibi jure vindicat hæc cochlea inter pulcherrimas ſui generis. Colore interdum variat; notas tamen ſemper retinet certas adeo et conſtantes, ut de ſpecie vix poſſit dubitari.

THE

PORPHYRY CONE.

GENERIC CHARACTER.

Animal reſembling a Limax or Slug.
Shell more or leſs conic or pyramidal.
Aperture longitudinal, linear, without teeth, entire at the baſe.
Pillar ſmooth.

SPECIFIC CHARACTER, &c.

White CONE, with brown reticular veins and longitudinal bands.
Heart-ſpotted CONE.
Porphyry CONE.

This ſhell, which is principally found in the Indian ocean, may juſtly be conſidered as one of the moſt beautiful of its genus: in color it ſometimes varies, but commonly retains characters ſo well marked as hardly to admit of a doubt as to the ſpecies.

INDEX.

Pl.

376. ALCYONIUM botryoides.
355. Anthias Argus.
371. ——— facer.
352. Antipathes myriophylla.
394. Brachionus urceolatus.
392. Bucco bidentatus.
369. Certhia venusta.
381. ——— chalybea.
395. Conus Aulicus.
382. Epinephelus Merra.
361. Fringilla tristis.
389. Falco Ponticerianus.
391. Flustra foliacea.
362. Gastrobranchus coccus.
374. Helix ringens.
374. ——— Carocolla.
387. Hippobosca Hirundinis.
377. Lanius Collurio.
375. Lonchiurus barbatus.
383. Madrepora rosea.
357. Merops Erythrocephalus.
364. Monoculus Pulex.
368. ——— Apus.
390. ——— conchaccus.
370. Nepa grandis.
379. Nais proboscidea.
365. Oriolus hæmorrhous.
360. Papilio Leilus.
388. ——— Io.
353. Phasianus varius.
356. Phalæna Polyphemus.
393. Phalangium reniforme.
385. 386. Platypus Anatinus.
373. Plotus melanogaster.
353. 351. Rana paradoxa.
367. Rana bicolor.

INDEX.

Pl.

376. ALCYONIUM Cauliflower.
355. Anthias Argus.
371. ——— red.
352. Antipathes Milfoil.
394. Brachionus bell-shaped.
392. Barbet tooth-billed.
360. Butterfly Leilus.
388. ——— Peacock.
357. Bee-Eater red-headed.
384. Beetle Kanguroo.
363. Calamary.
369. Creeper Leona.
381. ——— chalybean.
359. Cuttle-Fish eight-armed.
395. Cone Porphyry.
373. Darter black-bellied.
382. Epinephelus spotted.
389. Eagle Pondicherry.
350. 351. Frog paradoxical.
367. Frog blue and yellow.
391. Flustra foliaceous.
362. Gastrobranchus glutinous.
361. Goldfinch American.
387. Hippobosca Swallow.
375. Lonchiurus bearded.
383. Madrepore Rose.
364. Monoculus Flea.
368. ——— Cancroid.
390. ——— Muscle.
356. Moth Polyphemus.
370. Nepa great.
379. Nais rostrated.
365. Oriole red-rumped.
353. Pheasant variegated.
393. Phalangium reniform.
385. 386. Platypus Duck-billed.

384. Scarabæus Macropus.
366. Sciæna Cirroſa.
359. Sepia Octopodia.
363. —— Loligo.
349. Sturnus Ludovicianus.
380. Spongia flabelliformis.
372. Sphinx Nerii.
354. Tubularia campanulata.
392. ——— indiviſa.
359. Turbo petholatus.
378. Trachichthys Auſtralis.

366. Sciæna bearded.
377. Shrike red-backed.
374. { Snail ringent. —— Lamp.
372. Sphinx Oleander.
380 Sponge Fan.
349. Starling Creſcent.
378. Trachichthys Southern.
354. Tubularia campanulated.
392, ——— undivided.
359. Turbo variegated.

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